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EDITED BY JOSEPH WRIGHT

COMPARATIVE GRAMMAR OF THE GREEK LANGUAGE

BY

JOSEPH WRIGHT

PH.D., D.C.L., LL.D., LITT.D.

FELLOW OF THE BRITISH ACADEMY

PROFESSOR OF COMPARATIVE PHILOLOGY IN THE
UNIVERSITY OF OXFORD

‘Nur das Beispiel führt zum Licht;
Vieles Reden thut es nicht’

HENRY FROWDE
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PREFACE

IN writing this Grammar I have followed as far as possible the plan adopted in the other Grammars of the Series, my object being to furnish students with a concise account of the phonology, word-formation, and inflexions of the language. As the book is not intended for specialists¹ some more or less important details have been intentionally omitted. This is especially the case in regard to those dialects which have been preserved in such scanty fragments as to render it impossible for us to give a full account of their phonology. It must not, however, be assumed that these dialects have been entirely omitted; on the contrary, I have made considerable use of them in the phonology and elsewhere, wherever they have helped to throw light upon the development and history of the other dialects, such as Attic, Ionic, Doric, Aeolic.

Much of the time and labour spent on this Grammar has been taken up with selecting examples from the vast amount of material which I had collected to illustrate the sound-laws of the various dialects. This selection was necessary if I was to keep steadily in view the class of students for whom the Series of Grammars was originally planned, otherwise it would have been far easier to produce a Comparative Greek Grammar at least three times the size of the present one. In spite of this great compression of the material, I venture to think that I have included within a modest compass all that the ordinary

¹ In Greek Philology.

student will require to know about the subject, and I believe that the student who thoroughly masters the book will not only have gained a comprehensive knowledge of Comparative Greek Grammar in particular, but will also have acquired the elements of the Comparative Grammar of the Sanskrit, Latin, and Germanic languages. Examples have been more copiously used from these than from the other branches of the Indo-Germanic family of languages, because it can be safely inferred that the students who study this Grammar will already possess a practical knowledge of one or more of them.

This Grammar makes no pretence whatever of being an original and exhaustive treatise on the subject. In a book of this kind there is practically no scope for a display of either of these features, but I have contrived to bring within a comparatively small space a great deal of matter which will be new to students, and especially to those who are unable to study the subject in works written in foreign languages. All that I have attempted to do is to furnish our countrymen with a systematic and scientific treatment of Comparative Greek Grammar based upon the philological books and articles of the best workers of the present day in the wide field of Comparative Philology. Specialists in the subject will accordingly find little that is new in the book.

In Greek as in all the other Indo-Germanic languages there are still innumerable points which have never been satisfactorily explained, and not a few points about which there is a great divergence of opinion even among the best philologists. In all such cases I have carefully considered the various explanations which have been proposed, and have given those with which I agreed without, as a rule,

stating my authority, but where I was unable to agree with any of the proposed explanations I have generally preferred to state that the phenomenon in question has never been satisfactorily explained or that the explanation is unknown, rather than burden the book with attempted explanations with which I did not agree. I have generally omitted to give the authorities for various statements made throughout the Grammar, except in special cases where I thought it desirable to refer the student for further information to the sources which deal more fully with the case in point.

I gratefully acknowledge the help I have derived from the learned books and articles by the splendid band of German Philologists who have done so much to throw light upon the history and philology of the various Indo-Germanic languages. On pp. xiv-xvii will be found a select list of the books and articles which I have found most useful in the writing of this book, but a mere place in a list would not adequately express my indebtedness to the works of Brugmann, Hirt, Gustav Meyer, Osthoff, Johannes Schmidt, and Wackernagel. In conclusion I wish to express my sincere thanks to the Controller of the University Press for his great kindness in complying with my wishes in regard to special type; to Mr. A. Davidson, for his valuable collaboration in the making of the index verborum; and lastly to the press-reader, Mr. W. F. R. Shilleto, for his invaluable help with the reading of the proofs.

JOSEPH WRIGHT.

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January, 1912.

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ABBREVIATIONS

| | | | |
|---------|-----------------|---------|-------------------|
| abl. | = Ablative | Lat. | = Latin |
| Aeol. | = Aeolic | Lesb. | = Lesbian |
| Arcad. | = Arcadian | Lith. | = Lithuanian |
| Arm. | = Armenian | loc. | = locative |
| Att. | = Attic | Locr. | = Locrian |
| Balt. | = Baltic | ME. | = Middle English |
| Boeot. | = Boeotian | NE. | = New English |
| Cret. | = Cretan | NHG. | = New High German |
| Cypr. | = Cyprian | M.Ir. | = Middle Irish |
| dial. | = dialect(s) | OE. | = Old English |
| Dor. | = Doric | OHG. | = Old High German |
| El. | = Elean | O.Icel. | = Old Icelandic |
| ep. | = epic | O.Ir. | = Old Irish |
| Germ. | = German | O.Lat. | = Old Latin |
| Goth. | = Gothic | OS. | = Old Saxon |
| Gr. | = Greek | Osc. | = Oscan |
| Heracl. | = Heracleian | O.Slav. | = Old Slavonic |
| Herod. | = Herodotus | Pamph. | = Pamphylian |
| Hesych. | = Hesychius | prim. | = primitive |
| Hom. | = Homer(ic) | Skr. | = Sanskrit |
| Indg. | = Indo-Germanic | Thess. | = Thessalian |
| instr. | = instrumental | Umbr. | = Umbrian |
| Ion. | = Ionic | Ved. | = Vedic |
| Lac. | = Laconian | | |

The asterisk * prefixed to a word denotes a theoretical form, as ηa from $*\eta sa$ = Indg. $*\acute{e}sm$; $\sigma\pi a\rho\omega$ from $*\sigma\pi a\rho\acute{\omega}$ = Indg. $*sprij\acute{o}$.

TRANSCRIPTION

IN the following remarks on transcription we shall only deal with such points as are likely to present a difficulty to the student who is unfamiliar with the transcription used throughout this Grammar.

Long vowels are generally indicated by ¯, as ā, ī, ū; nasal vowels by ̃, as ă, ȳ; close vowels by . or ˙, as ɛ or ê; vocalic liquids and nasals by ̥, as ȷ, ȡ, ȣ, Ȥ; ö = the ö in German *Götter*, and ü the ü in *Mütter*.

SANSKRIT:—ñ = the palatal, and ŋ the guttural ng-sound. j = the j in NE. *just*. The dot . is placed under a dental, n and ś, to indicate the cerebral pronunciation of these consonants, as ṭ, ḍ, ṇ, ṣ. The combination explosive + h is pronounced as a voiceless or voiced aspirate according as the first element is voiceless or voiced, as *th*, *ph*, *dh*, *bh*. c = the *ch* in NE. *church*. ś is the palatal and ṣ the cerebral *sh*-sound. Final -ḥ from older -s or -ṣ = *h* in NE. *hand*.

PRIMITIVE GERMANIC:—In the writing of primitive Germanic forms the signs þ = the *th* in NE. *thin*; ð, ð the *th* in NE. *then*; ƿ = a bilabial spirant which may be pronounced like the *v* in NE. *vine*; ȝ = a voiced spirant, often heard in the pronunciation of German *sagen*; χ = German *ch* and the *ch* in Scotch *loch*.

GOthic:—aí = the *e* in NE. *get*; áí = nearly the *i* in NE. *five*; aú = the *o* in NE. *lot*; áu = nearly the *ou* in NE. *house*; ei = *ī* like the *ie* in German *sie* and nearly like the *ee* in NE. *feed*. þ = the *th* in NE. *thin*; medially after vowels b, d = the *v* in NE. *living* and the *th* in *then*; medially between vowels g = prim. Germanic ȝ, before another guttural it was pronounced like the *n*, ng in NE.

think, sing; **j** = NE. **y** in **you**; initially before **̣** and medially between vowels **h** = the **h** in NE. **hand**, but in other positions it was like the **ch** in Scotch **loch**; **lv** = the **wh** in the Scotch pronunciation of **when**; **q** = the **qu** in NE. **queen**.

LITHUANIAN:—**e** = the **e** in NE. **get**; **ė** = long close **ē** like the first **e** in German **leben**; **o** = long close **ō** like the **o** in German **Bote**; **ė** = the diphthong **iē** or **ia**; **ũ** = the diphthong **uo** or **ua**; **y** = **ī** like the **ie** in German **sie** and nearly like the **ee** in NE. **feed**. **j** = the **y** in NE. **you**; **ž** = the **s** in NE. **measure** and the **j** in French **jour**; **c** = the **ts** in NE. **cats**; **cz** = the **ch** in NE. **church**; **sz** = the **sh** in NE. **ship**.

OLD SLAVONIC:—**ě** = a long close **ē** like the first **e** in German **leben**, but in some positions it was probably a diphthong **ia** or **ea**; **ĩ** = a very close **e** nearly like the **é** in French **été**; **ũ** = a very close **o** or **ö**; **y** was probably an unrounded **u**-sound. **j** = the **y** in NE. **you**; **c** = the **ts** in NE. **cats**; **č** = the **ch** in NE. **church**; **ch** = the **ch** in Scotch **loch**.

INTRODUCTION

§ 1. Greek forms one branch of the Indo-Germanic family of languages. This great family of languages is usually divided into eight branches :—

I. **Aryan**, consisting of : (1) The Indian group, including Vedic (the language of the Vedas), classical Sanskrit, and the Prākrit dialects. The oldest portions of the Vedas date at least as far back as 1500 B. C., and some scholars fix their date at a much earlier period, see Winternitz, *Geschichte der indischen Litteratur*, pp. 246–58. (2) The Iranian group, including (a) West Iranian (Old Persian, the language of the Persian cuneiform inscriptions, dating from about 520–350 B. C.) ; (b) East Iranian (Avesta—sometimes called Zend-Avesta, Zend, and Old Bactrian—the language of the Avesta, the sacred books of the Zoroastrians).

II. **Armenian**, the oldest monuments of which belong to the fifth century A. D.

III. **Greek**, with its numerous dialects (§ 2).

IV. **Albanian**, the language of ancient Illyria. The oldest monuments belong to the seventeenth century.

V. **Italic**, consisting of Latin and the Umbrian-Samnitic dialects. From the popular form of Latin are descended the Romance languages : Portuguese, Spanish, Catalanian, Provençal, French, Italian, Raetoromanic, Roumanian or Wallachian.

VI. **Keltic**, consisting of : (1) Gaulish (known to us by Keltic names and words quoted by Latin and Greek authors, and inscriptions on coins) ; (2) Britannic, including Cymric or Welsh, Cornish, and Bas Breton or Armorican (the

oldest records of Cymric and Bas Breton date back to the eighth or ninth century); (3) Gaelic, including Irish-Gaelic, Scotch-Gaelic, and Manx. The oldest monuments are the Old Gaelic ogam inscriptions which probably date as far back as about 500 A. D.

VII. Germanic, consisting of:—

(1) Gothic. Almost the only source of our knowledge of the Gothic language is the fragments of the biblical translation made in the fourth century by Ulfilas, the Bishop of the West Goths.

(2) **Scandinavian** or **North Germanic**, which is subdivided into two groups: (*a*) East Scandinavian, including Swedish, Gutnish, and Danish; (*b*) West Scandinavian, including Norwegian, and Icelandic.

The oldest records of this branch are the runic inscriptions, some of which date as far back as the third or fourth century.

(3) **West Germanic**, which is composed of:—

(*a*) High German, the oldest monuments of which belong to about the middle of the eighth century.

(*b*) Low Franconian, called Old Low Franconian or Old Dutch until about 1200.

(*c*) Low German, with records dating back to the ninth century. Up to about 1200 it is generally called Old Saxon.

(*d*) Frisian, the oldest records of which belong to the fourteenth century.

(*e*) English, the oldest records of which belong to about the end of the seventh century.

VIII. Baltic-Slavonic, consisting of: (1) The Baltic division, embracing (*a*) Old Prussian, which became extinct in the seventeenth century, (*b*) Lithuanian, (*c*) Lettic (the oldest records of Lithuanian and Lettic belong to the sixteenth century); (2) the Slavonic division, embracing: (*a*) the South-Eastern group, including Russian (Great

Russian, White Russian, and Little Russian), Bulgarian, and Illyrian (Servian, Croatian, Slovenian); (*b*) the Western group, including Czech (Bohemian), Sorabian (Wendish), Polish and Polabian. The oldest records (Old Bulgarian, also called Old Church Slavonic) belong to the second half of the ninth century A.D.

§ 2. The oldest Greek records exhibit clearly defined dialectal peculiarities which have been treated in some detail in the phonology and accidence of this book. For a detailed account of the Greek dialects and of the literature on the subject see Thumb, *Handbuch der griechischen Dialekte* (1909).

It is to Greek inscriptions that we must look for the purest forms of the various dialects. The literary language, especially that of the poets, is in many respects artificially constructed. Towards the end of the fifth century B. C. was gradually formed on the basis of the Attic dialect a literary language common to all Greeks, which almost entirely excluded the use of the other dialects from the later prose literature of antiquity. In this grammar Attic is taken as the standard and is treated in greater detail than the other dialects. It was formerly the custom to divide the Greek dialects into three groups:—Ionic-Attic, Doric, and Aeolic. This threefold division was both unsatisfactory and unscientific, because Aeolic was made to embrace all Greek dialects which were not either Ionic-Attic or Doric, whereas strictly speaking Aeolic proper only embraces the North-East group of dialects. The only really scientific classification of the dialects must be based on the lexicographical and grammatical peculiarities as exhibited on the oldest inscriptions. In this manner Greek can be conveniently divided into the following dialects or groups of dialects:—

I. **Ionic-Attic**: (1) Ionic including the dialects of (*a*) The central portion of the West Coast of Asia Minor together

with the islands of Chios and Samos ; (b) The Cyclades : Naxos, Ceos, Delos, Paros, Thasos, Siphnos, Andros, Ios, Myconos ; (c) Euboea. (2) The dialect of Attica.

II. **The Doric group** including the dialects of (1) Laconia together with the dialects of Tarentum and Heraclea ; (2) Messenia ; (3) Argolis and Aegina ; (4) Corinth together with Corcyra ; (5) Megara together with Byzantium and Selinus ; (6) The Peloponnesian colonies of Sicily ; (7) Crete ; (8) Melos and Thera together with Cyrene ; (9) Rhodes together with Gela and Acragas ; (10) The other Doric islands in the Aegean : Anaphe, Astypalaea, Telos, Nisyros, Cnidos, Calymna, Cos, &c.

III. **The dialect of Achaia and its colonies.**

IV. **The dialect of Elis.**

V. **The North-West group** including the dialects of (1) Epirus, Acarnania, Aetolia, Phthiotis and of the Aenianes ; (2) Locris and Phocis including Delphi.

VI. **The Arcadian-Cyprian group** including the dialects of (1) Arcadia ; (2) Cyprus.

VII. **The North-East or Aeolic group** including the dialects of (1) Lesbos and the coast of Asia Minor adjoining ; (2) Thessaly except Phthiotis ; (3) Boeotia.

VIII. **The dialect of Pamphylia.**

PHONOLOGY

CHAPTER I

PRONUNCIATION

§ 3. The account of Greek pronunciation given below is only approximately accurate. It is impossible to ascertain with perfect certainty the exact pronunciation of any language in its oldest period. The Greek letters had not always the same sound-value in all the dialects, and at different periods the same letter was often used to express different sounds. Many examples of this kind will be found in the phonology. For a detailed account of Greek pronunciation see Blass, *Über die Aussprache des Griechischen*, third edition (1888); and for the history of the alphabet see Kirchhoff, *Studien zur Geschichte des griechischen Alphabets*, fourth edition (1887), and Giles, *Manual of Comparative Philology*, second edition (1901), pp. 517-22, where other literature on the subject will also be found.

A. THE VOWELS.

§ 4. *a*, *i*, *u* were used to express both short and long vowels. When long they are expressed in this grammar by *ā*, *ī*, *ū*. *e*, *o* were short, the corresponding long of which were expressed by *η*, *ω*.

§ 5. *a* had approximately the same sound as in German **Mann**, **Gast**, and northern English dial. *lad*, as *ἀγρός*, *τῆμάω*, *δάκρυ*, *οἶδα*; *πατήρ*, *στατός*; *δέκα*, *τατός*; *βάλλω*, *πλατύς*; *θάρσος*, *ἔδρακον*.

ā had the same sound as the *a* in English **father**, as *τιμᾶτε*, *μέλας*, *χώρα*, Dor. *ἄδύς*, *μάτηρ*, *τιμᾶ*.

§ 6. *ε* was a close vowel in Attic and Ionic like the *é* in French *été*, as *ἔδω*, *φέρω*, *οἶδε*. That *ε* was close in these dialects is shown by the contraction of *εε* to *ει* (§ 12) in words like *φιλεῖτε* from *φιλέετε*. In Aeolic and some Doric dialects the *ε* was open, hence the contraction of *εε* to *η* in words like *φίλη*, *ἦχον*=Att. *φίλει*, *εἶχον*; and it must also have been open in Elean and Locrian where *ε* partly became *α* (§ 44, note 2).

η was an open vowel like the *ai* in English **air** and the *è* in French **père**, as *Ζῆν*, *τίθημι*, *εἷς*; Att. Ion. *μήτηρ*, *ἔφην*, *σελήνη* beside Dor. *μάτηρ*, *ἔφᾶνα*, *σελᾶνᾶ*. The *η* from older *ā* was originally more open than the *η*=Indg. *ē*, the former was written *H* and the latter *E* on old Ionic inscriptions, but the two sounds fell together in Attic in the fifth century B. C., see §§ 50, 51.

§ 7. It cannot be determined whether *ι* was an open vowel like the *i* in English **bit** or a close vowel like the *i* in French **fini**, as *ἵμεν*, *πόλις*, *τρισί*.

ι was probably close like the *ie* in German **Vieh** (=fī), and nearly like the *ee* in English **see**, as *ἱμάς*, *πίθι*, *πίων*, *κλίνω*.

§ 8. *ο* was a close vowel which is common in some English dialects in such words as **coal** (kól), **foal** (fól), and in the final syllable of such words as **fellow** (felól), **window** (windól). It corresponded in quality but not in quantity to the *o* in German **Bote** (bōte), as *ὀκτώ*, *πότερος*, *πρό*. That *ο* was close in Attic and Ionic is shown by the contraction of *οο* to *ου* (§ 17) in words like *δηλοῦμεν* from *δηλόομεν*.

ω was an open vowel like the *au* in English **aught**, as *δίδωμι*, *δῶτωρ*, *φέρω*.

§ 9. In Attic, Ionic and probably also in some other dialects *υ* (=ü) had the same sound as the *u* in French **tu**, as *ἐρυθρός*, *ζυγόν*, *μέθυ*. The original *u*-sound (=the *u* in

English **full**) remained in Laconian, Boeotian, Lesbian, Thessalian, Arcadian, Cyprian and Pamphylian, but was generally written *ou* (see § 47, note 1).

$\bar{u} = \bar{u}$ in those dialects which changed short *u* to *ü*, as *ἐφῦτον*, *θῦμός*, *μῦς*.

§ 10. The short diphthongs *αι*, *ει*, *οι*; *αυ*, *ευ*, *ου*; *υι* = *α*, *ε*, *ο* + *ι*; *α*, *ε*, *ο* + *υ*; *υ* + *ι*, but the original *u* quality was preserved in the second element of the *u*-diphthongs.

§ 11. *αι* was nearly like the *i* in English **five**, as *αἶθω*, *φέρεται*; *βαίνω*, *τέκταινα*.

§ 12. *ει* (= Indg. *ei*, § 58) had nearly the same sound as the *ai* in English **stain** until about the beginning of the fifth century B. C., it then became long close \bar{e} in Attic, Ionic and the milder Doric dialects, although the *ει* was retained in writing, as *εἶσι*, *λείπω*, *πείθω*; *κτείνω*, *φθείρω*. The *ει* was then used to express the long close \bar{e} which arose from contraction and from compensation lengthening, as *φίλει*, *τρέις*, *εἶχον* from *φίλεε*, **τρέjes*, **έ-εχον*; *εἶς* = Cret. *ἔνς*, *τιθείς*, *χαρίεις* from **τιθεντς*, **χαριφεντς*; this *ει* was written *ε* on the oldest Attic inscriptions, whereas prim. Greek *ει* was always written *ει*.

§ 13. *οι* had the same sound as the *oy* in English **boy**, as *οἶδα*, *φέρομεν*, *λύκοι*.

§ 14. *υι* = $\bar{u}i$ (see *υ* above) was a special Greek development and arose partly from the loss of an intervening consonant and partly from contraction, as *ιδυῖα*, *νίος* from **φιδυσja*, **συjος*, loc. sing. Hom. *πληθυνῖ*.

§ 15. *αυ* had the same sound as the *au* in German **Haus**, and was nearly like the *ou* in standard English **house**, as *αὐξάνω*, *ταῦρος*.

§ 16. *ευ* had approximately the same sound as is often heard in the southern English dialect pronunciation of **house** (*eus*), **mouse** (*meus*), as *γεύω*, *πεύθομαι*, *Ζεῦ*.

§ 17. *ου* (= Indg. *ou*, § 62) = *ο* + *υ* (see *ο* above) until the fifth century B. C., it then became long close \bar{u} through the

intermediate stage of long close \bar{o} , although the ou was retained in writing. The ou was then used to express the long close \bar{o} later \bar{u} which arose from contraction and compensation lengthening, as $\nu\bar{o}\bar{u}s$, $\lambda\bar{u}\kappa\bar{o}\bar{u}$, $\delta\eta\lambda\bar{o}\bar{u}\mu\bar{e}\nu$, from $\nu\acute{o}s$, &c.; $\delta\omicron\upsilon\rho\acute{o}s$ from $*\delta\omicron\rho\acute{f}\acute{o}s$; $\phi\acute{e}\rho\omicron\upsilon\sigma\iota$ = Dor. $\phi\acute{e}\rho\omicron\upsilon\tau\iota$, $\lambda\acute{u}\kappa\omicron\upsilon\varsigma$ = Cret. $\lambda\acute{u}\kappa\omicron\upsilon\varsigma$, $\delta\iota\delta\omicron\upsilon\varsigma$ from $*\delta\iota\delta\omicron\upsilon\tau\varsigma$; this ou was written o on the oldest Attic inscriptions, whereas prim. Greek ou was always written ou .

§ 18. The original long diphthongs $\bar{a}i$, $\bar{e}i$, $\bar{o}i$; $\bar{a}u$, $\bar{e}u$, $\bar{o}u$ became short before consonants already in prim. Greek, as in $\delta\rho\alpha\bar{i}\mu\bar{e}\nu$, $\gamma\rho\alpha\phi\bar{e}\bar{i}\mu\bar{e}\nu$, $\lambda\acute{u}\kappa\omicron\iota\varsigma$; $\nu\acute{a}\bar{u}s$, $Z\acute{e}\bar{u}s$, $\beta\omicron\bar{u}s$, from $*\delta\rho\bar{a}i\mu\bar{e}\nu$, &c. (§ 63). The second element of the long final diphthongs $\bar{a}i$, $\bar{e}i$, $\bar{o}i$ ceased to be pronounced in the second century B.C., and in ηi probably much earlier. The modern mode of writing these diphthongs as α , η , ω ($\theta\epsilon\alpha$, $\chi\acute{o}\rho\alpha$, $\tau\bar{i}\mu\bar{\eta}$, $\lambda\acute{u}\kappa\omega$) only dates back to manuscripts of the twelfth century.

B. THE CONSONANTS.

§ 19. The voiceless explosives π , τ , κ , the voiced explosives β , δ , the nasals μ , ν and the liquid λ had approximately the same sound-values as in English. The remaining consonants require special attention.

§ 20. In the oldest period of the language γ was in all positions a voiced explosive like the g in English *go* or *ago*, as $\gamma\acute{e}\nu\omicron\varsigma$, $\gamma\upsilon\nu\acute{\eta}$, $\acute{\alpha}\gamma\rho\acute{o}s$, $\acute{\alpha}\mu\acute{\epsilon}\lambda\gamma\omega$, $\delta\lambda\acute{i}\gamma\omicron\varsigma$, but already at an early period it became a voiced spirant in the popular dialect medially between vowels. The guttural nasal η (=the n in English *think* and the ng in *sing*) was expressed by ν on the oldest inscriptions, but after the combinations $\gamma\nu$, $\gamma\mu$ had become $\eta\nu$, $\eta\mu$ in such words as $\gamma\acute{\iota}\gamma\gamma\omicron\mu\alpha\iota$, $\acute{\alpha}\gamma\mu\acute{o}s$ (§ 155), it came to be expressed by γ , as $\acute{\alpha}\gamma\gamma\epsilon\lambda\omicron\varsigma$, $\acute{\alpha}\gamma\kappa\acute{\omega}\nu$, $\acute{\alpha}\gamma\chi\omega$, $\sigma\phi\acute{\iota}\gamma\xi$.

§ 21. In the earliest historic period of the language ζ was a compound consonant like the zd in English *blaz(e)d*

and arose from older **dz** by metathesis (§ 129, 8), as *ζυγόν*, *Ζεύς*, *ἐλπίζω*, *πεζός*, *ἄζομαι*. The **dz** must have become **zd** before the *ν* disappeared in words like *Ἀθήναζε* from **Ἀθάνανζ-δε* (§ 153); cp. also forms like *διόζωτος*, *θεόζωτος* beside *διόσδοτος*, *θεόσδοτος*. ζ probably became **z** in Attic some time during the fourth century B. C. Some scholars assume that ζ was pronounced like the **s** (= **ž**) in English **measure**, **pleasure** already in the earliest period of the language.

§ 22. ρ had a strong trill formed by trilling the point of the tongue against the gums. It was voiceless initially (written ρ, see § 215), and medially after φ, θ, χ and probably after all other voiceless consonants. In other positions it was voiced like the Scotch **r** in **hard**, **bearing**, **bear**, as *ἐρυθρός*, *φέρω*, *ἄγρός*, *ἔαρ*.

§ 23. σ was voiced (= **z**) before voiced explosives, as *πρέσβυς*, *σβέννυμι*, *διόσδοτος*, *μίσγω*, but voiceless in other positions, as *στατός*, *θάσπος*, *λύκος*. It is doubtful how the Ionic -σσ- and Attic, Boeotian, Thessalian and Cretan -ττ- were pronounced in such words as Ion. *πίσσα*, *θάσσω*, *πρήσσω* beside Attic, &c. *πίττα*, *θάττων*, *πράττων* (cp. § 129, 7). Some scholars assume that the -σσ-, -ττ- was like the **th** in English **thin** or a kind of lisped **s**, whilst others think that the sound was the same as the **sh** in English **she**.

§ 24. φ, θ, χ were aspirated voiceless explosives like the **p**, **t**, **k** in German **paar**, **teil**, **kein** and in the Anglo-Irish pronunciation of **pair**, **tell**, **kill**, as *φέρω*, *νέφος*, *ὄφρυς*; *θερμός*, *πείθω*, *τίθημι*, *οἶσθα*; *χειμών*, *λείχω*, *ἄγχω*. θ became a spirant (= **th** in English **thin**) at an early period in some dialects. φ and χ also became spirants later, but φ, θ, χ must have been aspirated voiceless explosives at the time de-aspiration took place, cp. *πέφευγα*, *τρέφω*, *κέχυκα*: *φεύγω*, *θρέψω*, *χέω* (§ 115); and also when π, τ, κ became aspirated before a following rough breathing, cp. *ἀφ' ὧν*, *ἀνθ' οὗ*, *οὐχ ὅπως*.

§ 25. ξ, ψ probably represented the combinations κς, πς (often written χς, φς), as ξέξω, λέξω, γράψω, λείψω.

§ 26. The spiritus asper ' corresponded to the English h in house, and was originally represented by H. It disappeared in the prehistoric period in Lesbian, Elean, the dialect of Gortyn, and the Ionic of Asia Minor. H then came to be used in Ionic to represent the ē from older ā (§ 51). At a later period the H was halved ɥ, ɥ, and the former was used for the spiritus asper and the latter for the lenis. From these fragments came the later signs ' and '.

§ 27. On ƒ and ɸ see § 120 and § 47, note 2.

ACCENT.

§ 28. By accent in its widest sense is meant the gradation of a word or word-group according to the degree of stress or of pitch with which its various syllables are uttered. Although strictly speaking there are as many different degrees of accent in a word or word-group as there are syllables, yet for ordinary purposes it is only necessary to distinguish three degrees, the principal accent, the secondary accent, and the weak accent or as it is generally termed the absence of accent. The secondary accent is as a rule separated from the principal accent by at least one intervening syllable.

All the Indo-Germanic languages have partly pitch (musical) and partly stress (expiratory) accent, but one or other of the two systems of accentuation always predominates in each language, thus in Greek and Vedic the accent was predominantly pitch, whereas in the oldest periods of the Italic dialects, and the Keltic and Germanic languages, the accent was predominantly stress. The effect of this difference in the system of accentuation is clearly seen by the preservation of the vowels in unaccented syllables in the former languages and by the weakening or loss of them in the latter. In the early period of the

parent Indg. language, the stress accent must have been more predominant than the pitch accent, because it is only upon this assumption that we are able to account for the origin of the various phenomena of quantitative ablaut (§§ 86-90). It is now a generally accepted theory that at a later period of the parent language the system of accentuation became predominantly pitch with which was probably connected the origin of qualitative ablaut (§ 83). This pitch accent was preserved in Greek and Vedic, but became predominantly stress again in the primitive period of nearly all the other languages. It had also become predominantly stress in Greek by about the beginning of the Christian era, see Kretschmer, *Kuhn's Zeitschrift*, xxx, pp. 591-600.

§ 29. The quality of the prim. Indg. syllable-accent was of two kinds, the 'broken' or acute and the 'slurred' or circumflex. The former was a rising and the latter a rising-falling accent. Long vowels with the acute accent were bimoric and those with the circumflex trimoric. All original long vowels including the first element of long diphthongs had the acute accent. The circumflex accent was unoriginal and arose in prim. Indo-Germanic in the following manner:—(a) From the contraction of vowels, as *-ās* from *-ā-es* in the nom. pl. of *ā*-stems, *-ōs* from *-o-es* in the nom. pl. of *o*-stems, *-ōi* from *-o-ai* in the dat. sing. of *o*-stems, cp. *θεῶ*, see § 79. The circumflex also arose by vowel contraction within Greek itself, as *τρῆς* from **τρέjes*, *ῥχούς* from *ῥχόος*, *φορεῖτε* from *φορέετε*, *φορῶ* from *φορέω*. (b) When a short vowel disappeared after a long vowel, as in gen. sing. *θεῶς* from an original form **dhwesāso* (cp. § 92 (a)), cp. also *ναῦς* from an original form **nāwos* beside *Ζεύς* from **djéwos*. (c) When a medial long diphthong lost its second element, as in acc. sing. *βῶν*, Vedic *gām* (= metrically *gaam*), *Ζῆν*, Vedic *dyām* (= metrically *dyaam*), from **gōm*, **djēm*, older **góum*, **djéum*. The

same change from the acute to the circumflex accent also took place in prim. Indo-Germanic when a nasal or liquid disappeared after a long vowel, as Lith. *akmũ* (= *ō*), *stone* beside *ἡγεμών*; Goth. *tuggō* (= *ō*), *tongue* beside *hana* (= *ōn* or *ēn*), *cock*; Lith. *motė* (= *ē*), *wife* beside *πατήρ*. This distinction in the quality of the accent was preserved in final syllables containing a long vowel in Greek, Vedic, Lithuanian, and in the oldest periods of the Germanic languages. The old inherited difference in the quality of the syllable-accent was also preserved in Greek in final syllables which had not the principal accent, cp. loc. sing. *οἴκοι*, *φερομένοι* beside *Ἰσθμοί* and nom. pl. *οἴκοι*, *φερόμενοι* beside *ἰσθμοί*, *θεοί*; opt. *λείποι*, cp. Lith. *te-sukė*, *he shall turn*. The circumflexed trimoric and the acuted dimoric short diphthongs of final syllables had each lost a mora in prim. Greek before the trisyllabic law came into operation (§ 30).

§ 30. The word-accent in the parent Indg. language was free or movable, that is its position was not determined either by the number or the length of the syllables which a word contained. This freedom in the position of the principal accent of a word was better preserved in Vedic than in any of the other Indg. languages. The free accent was still preserved in prim. Germanic at the time when Verner's Law operated, whereby the voiceless spirants became voiced when the vowel immediately preceding them did not bear the principal accent of the word (§ 100, note 4). At a later period of the prim. Germanic language, the principal accent became confined to the first syllable of the word. And in like manner the principal accent of the word became confined to the first syllable in prim. Italic and Keltic, for the further history of the principal accent in these branches see Brugmann, *Grundriss*, &c., vol. i, second ed., pp. 971-80.

The word-accent became restricted in its freedom in

prim. Greek by the development of the so-called trisyllabic law whereby the principal accent could not be further than the third syllable from the end of the word nor further than the second syllable when the last syllable was originally long, as ἀπότισις from *ἄποτισις: Skr. āpa-citiḥ, φερόμενος, φερομένοιο from *φέρομενος, *φέρομενοιο: Skr. bhāramāṇaḥ, bhāramāṇasya, γενέων from *γένεσων: Skr. jānasām, ἡδίων: Skr. svādiyān, ἡδίω from *σῆδι-ῖοσα, cp. Skr. svādiyaśam. Words of the type πόλεως from older πόλῃος by quantitative metathesis (§ 72) are not exceptions to the above law, which was older than the change of ηο to εω. At the time when this new system of accentuation came into existence the original trimoric long vowels and short diphthongs and the original bimoric short diphthongs -oi, -ai, -ei had each lost a mora (§ 29), cp. γενέων from Indg. *génēsōm, loc. sing. φερόμενοι beside nom. pl. φερόμενοι; φέρεσθαι, φέρομαι.

The new system of accentuation was also extended to polysyllabic enclitic words in which more than the two or respectively three last morae were unaccented, as πότερος, ποτέροιο from *^lποτερος, *^lποτεροιο, ἡμων, ἡμῖν from *^lἡμων, *^lἡμῖν (cp. μου, μοι); λίπωμεν, δέδορκα from *^lλιπώμεν, *^lδεδορκα (§ 38).

NOTE.—In the Lesbian dialect the accent was in all cases thrown as far back as the trisyllabic law would permit, as βασιλεὺς, ἔρυθρος, θῦμος, Ζεὺς, πόταμος, σόφος=Att. βασιλεύς, ἐρυθρός, θύμός, Ζεύς, ποταμός, σοφός. For peculiarities of the Doric dialect see § 38, note.

§ 31. In words ending in a trochee with a long vowel or a diphthong in the penultimate, the highest pitch went from the second mora of the syllable to the first, as ἦμα from *ῆμα, νῆες from *νᾶφες, hence also ἐστῶτες from ἐσταότες.

§ 32. Dactylic oxytona or oxytona ending in a dactyl

became paroxytona, as ἀγκύλος, αἰόλος, βοηδρόμος, γομφίος, θηρίον, καμπύλος, λογογράφος, ὀφρύς, ποικίλος, τελεσφόρος, beside αἰγοβοσκός, παχυλός, &c. This law has numerous exceptions owing to analogical formations, as δημοβόρος, αἰσχρολόγος after the analogy of forms like τελεσφόρος; ἀριστερός after δεξιτερός; αἰρετός, αἰνετός after μενετός, &c.; λελυμένος, τεταμένος after πεπληγμένος, πεφυγμένος.

§ 33. But apart from the above changes and analogical formations like χρῦσοῦς for *χρῦσους after the analogy of χρῦσοῦ, -ῶ, and conversely εὔνου, -ῶ for *εὔνοῦ, -ῶ after εὔνους; τιθεῖσι, διδοῦσι for *τίθεισι, *δίδουσι after ἰσταῖσι from *ἰσταῖσι (§ 439); ἑμός, τεός, ἐός for *ἑμος, *τέφος, *ἕφος after *μός, σός, φός, the original Indg. accent generally remained in Greek when it did not come in conflict with the trisyllabic law, cp. γένος, γένεος: Skr. jānaḥ, jānasaḥ, μέθυ: Skr. mādhu, θύγατερ: Skr. dūhitar, φράτορες: Skr. bhrātarah, οὔθαρ: Skr. ūdhar, δώτωρ: Skr. dātā, πατήρ, πατέρα, πατράσι: Skr. pitā, pitāram, pitṛṣu, Dor. πώς, ποδός, ποσί: Skr. pāt, padāḥ, patsú, γενετήρ: Skr. janitā, κλυτός: Skr. śrutāḥ, ἐρυθρός: Skr. rudirāḥ, βαρύς: Skr. gurūḥ, ὥκός: Skr. āśūḥ, ἐπτά: Skr. saptā, &c.

§ 34. As we have already seen (§ 28) there are strictly speaking as many grades of accent in a word as there are syllables. In Greek the principal accent of a word was indicated by the acute or circumflex and all other syllables were regarded as unaccented. And as papyri show an attempt was sometimes made to indicate such syllables by the grave accent, as in θερόσδοτος. But in ordinary Greek the grave accent became restricted to final syllables and merely denoted the absence of accent as contrasted with the acute, as ἀνδρὶ τούτῳ, περὶ τούτου beside τούτου πέρι.

§ 35. In sentence-accent we have to do with the accentual relations between the various members of a sentence or word-group. No word of whatever part of speech was

originally always accented in every position in the sentence. Any word could under certain conditions lose its independent accent and thus become enclitic. Certain particles were always enclitic already in the parent Indg. language, as *qe = τε, Skr. ca, Lat. que, *ge in ἐμέ-γε = Goth. mi-k, OE. me-c, *de in οἶκόν-δε, &c. The original distinction between the accented and unaccented forms of the pronouns was still preserved in the oldest periods of the separate Indg. languages and in many of these languages it has been preserved down to the present day (§§ 397 ff.).

§ 36. The vocative was originally partly accented and partly enclitic or unaccented. It was accented at the beginning of a sentence and unaccented in other positions. The accented form became for the most part generalized in prim. Greek and thus came to have the same accentuation as the nominative. Vocatives like ἀδελφε, θύγατερ, πόνηρε, μόχθηρε, Ἀγάμεμνον probably represent the original forms *ἰ-ἀδελφε, *ἰ-θυγατερ, &c., cp. πότερος from *ἰ-ποτερος (§ 30), and that forms like Ζεῦ = Ζεύ, πάτερ, ἄνερ for *ἰ-Ζευ, *ἰ-πατερ, *ἰ-άνερ were accented after the analogy of the trisyllabic forms which were subject to the trisyllabic law. In Vedic the accent was always thrown back on to the first syllable when the sentence began with the vocative, as ágnē, dévi, vādhu, pítar, beside nom. agníh, fire, dēví, goddess, vadhúh, woman, pitá, acc. pitáram, father.

§ 37. When one word defined another more closely in compounds the first element was generally accented and the second became enclitic, as ἀνά-βασις, ἔν-υπνος, παρά-παν, πρό-δοσις, ὑπέρ-μορον, cp. Lat. dēnuo = dē novō; ἄ-δωρος, ἄ-λυτος, ἄ-φθιτος, cp. OE. ún-cūp, unknouen; Νεά-πολις, πάμ-παν, cp. Lat. decém-virī; ἔν-δεκα, δώ-δεκα = Skr. dvā-dāsa, ékato-m-βη, dí-φρος; Διός-κουροι, Διός-δοτος, Ἑλλήσ-ποντος.

§ 38. In prim. Indo-Germanic the finite forms of the

verb were partly accented and partly enclitic. But when the one and when the other form was used, it is impossible to determine for all cases because the original system of verbal accentuation has not been preserved in the historic period of any of the languages. It was best preserved in Vedic in which the finite forms of the verb were always accented in subordinate sentences and at the beginning of principal sentences, but unaccented in all other positions, cp. *yádi pragácchati*, *if he goes forward*, *āpnóti imá lōkám*, *he obtains this world*, beside *prá gacchati*, *he goes forward*, *ní padyatē*, *he lies down*, *á-bharam* = *ἔ-φερον*, but the fixed rule that the finite forms were always accented in subordinate sentences, independently of their position in the sentence, was doubtless a special development within Vedic itself. The original rule in the parent Indg. language probably was that the finite forms were accented when they began the sentence, but unaccented when they came after the subject. But after negatives and other adverbs including the augment, they were partly accented and partly unaccented. The type *οὐ φημι*, *ἀπό-λαβε*, *πρόσ-λαβε*, *ἔ-λαβον* was probably the rule at the beginning of the sentence, and also after unaccented words, as *παρ-έκδος*, *συμ-πρό-ες*, *παρ-έ-σχον*, *προσ-εῖχον*.

The original rule that the finite forms were accented when they began the sentence was preserved in Greek in a few aorist imperatives like *εἰπέ*, *έλθέ*, *εὖρέ*, *λαβέ* (§ 540) beside *ἄπειπε*, *ἄπελθε*, *ἔξευρε*, *ἀπόλαβε*, and such imperative forms became generalized for all positions in the sentence, cp. also aor. mid. imperatives like *λαβοῦ*, *λιποῦ*, &c. In other respects it became the rule in prim. Greek to throw back the accent of the finite forms as far as was permitted by the trisyllabic law, as *ἔφερον*, *φέρουσι*, *φερόμεθα*, *ἐφερόμεθα*, *ἐλιπόμην*; *ἴμεν*, *ἴδμεν* (*ἴσμεν*), *δίδομεν*, *δέδορκα* for older **ἰμέν*, **φιδμέν*, **διδομέν*, **δεδόρκα* = Skr. *imāḥ*, *vidmā*, *da-d-māḥ*, *dadārśa*; *λίπον*, *λίπομεν* for

older *λιπόν, *λιπόμεν, &c. The original unaccented or enclitic forms then came to be accented after the analogy of the original accented forms. The original accented and unaccented forms were preserved side by side in εἶ, ἔστι, φῆς beside εἶμι, ἐστὶ, φημι, φησὶ, &c.

NOTE.—Doric had a processive accent both in verbs and nouns as compared with Attic, as ἐλάβον, ἐλύσαν, ἐστάσαν, ἐφιλάθην = Att. ἔλαβον, ἔλυσαν, ἔστησαν, ἐφίληθην; ἀγγέλοι, αἶγες, ἀνθρώποι, φιλοσόφοι = Att. ἄγγελοι, αἶγες, ἄνθρωποι, φιλόσοφοι.

§ 39. Oxytona preserved their accent in pausa, but otherwise became proclitic, as ἀνδρὶ τούτῳ. The only exception is the interrogative pronoun τίς which always preserved its accent.

§ 40. The accented word in combinations consisting of an accented word and an enclitic preserved its original accentuation when the combination was in accordance with the trisyllabic law, as φίλος τις, πολλάκις γε, καλός τις, ἀγαθός τις, φῶς τε, πατήρ μου, τῆς τε, ἀγαθὰ τινα, καλός ἐστι, ποταμοὶ τινες, αὐτός φησιν.

If the enclitic became accented by the trisyllabic law, the first word was accented in the same manner as it would be if followed by another originally accented word, as αὐτὸς πότερον, πατήρ ἡμεων, &c. Forms like ἤκουσά τινων, παῖδές τινων, καλῶν τινων, &c. for *ἤκουσα τίνων, &c. were due to the analogy of ἤκουσά τινος, &c.; and conversely ἄλγεα ἡμιν for *ἄλγεά ἡμιν after the analogy of ἄλγεα ἡμῖν.

In other cases where we should expect the original accentuation to be regulated by the trisyllabic law, we find nothing but deviations from the law. These deviations were due to the tendency in the language to preserve the position and individuality of the accent of the first word, and partly also to prevent two acutes following each other in successive syllables. The trisyllabic law only held good for

these combinations in so far as not more than two syllables were allowed to be unaccented after the principal accent :—

The first word, whether proparoxytone or properisponenon, got the acute accent on the final syllable in addition to its own accent, *ἄνθρωπόν τινα*, *ἄγγελός τις*, *πόλεμόν τινα*, *πρῶτός φησι*, *σῶμά τε*, *σῶμά που*, *σῶμά τινος*. This acute was the same which unaccented words had before enclitics, as *περί τε*, *ἀλλά τινες*, *εἰ που*, &c.

Paroxytona remained unchanged before monosyllabic enclitics containing a long vowel, as *ἄλλως πως*, *πολλάκις πως*.

Dissyllabic enclitics got a principal accent after paroxytona, as *φίλος ἐστί*, *τέχνης τινός*, *ἄλλων τινῶν*. This was the same accent which enclitics had at the beginning of a sentence, as *τινῶν μὲν*. See Brugmann, *Griechische Grammatik*, pp. 157-9.

CHAPTER II

THE PRIMITIVE INDO-GERMANIC VOWEL-SOUNDS

§ 41. The parent Indo-Germanic language had the following vowel-system :—

| | |
|------------------|------------------------|
| Short vowels | a, e, i, o, u, ə |
| Long „ | ā, ē, ī, ō, ū |
| Short diphthongs | ai, ei, oi, au, eu, ou |
| Long „ | āi, ēi, ōi, āu, ēu, ōu |
| Short vocalic | ɪ, ʏ, ʊ, ɘ |

NOTE.—1. The short vowels i, u, ə, the long vowels ī, ū, and vocalic ɪ, ʏ, ʊ, ɘ occurred originally only in syllables which did not bear the principal accent of the word.

The short vowels *i*, *u*, and vocalic *ī*, *ū*, *ē*, *ō* arose from the loss of *e* in the strong forms *ei*, *eu*, *eī*, *em*, *en*, *er*, which was caused by the principal accent having been shifted to some other syllable in the word.

ə, the quality of which cannot be precisely defined, arose from the weakening of an original *ā*, *ē*, or *ō*, caused by the loss of accent. It is generally pronounced like the final vowel in German *Gabe*, *gift*.

ī and *ū* were contractions of weak diphthongs which arose from the strong forms *eiə*, *āi*, *ēi*, *ōi*; *euə*, *āu*, *ēu*, *ōu* through the loss of accent. The *e* in *eiə*, *euə* had disappeared before the contraction took place. Although the *ei*, *eu*, which arose from the weakening of long diphthongs, generally became contracted to *ī*, *ū*, there are phonological reasons for assuming that they occasionally became *ai*, *au* under certain unknown conditions and thus fell together with original *ai*, *au*, but the uncontracted forms were so rare in the parent Indg. language that no further account will be taken of them in this Grammar.

The diphthongs were falling diphthongs, that is the accent was on the first element (see § 98, note 4). Strictly speaking the combination *a*, *e*, or *o* + nasal or liquid is also a diphthong, because the history and development of such combinations are precisely parallel with those of the diphthongs *ai*, *ei*, *oi* and *au*, *eu*, *ou*. See Ch. IV.

2. Upon theoretical grounds it is generally assumed that the parent Indg. language contained long vocalic *ī*, *ū*, *ē*, *ō*, *ī̄*, see § 68.

§ 42. In the following table is given the normal development of the prim. Indo-Germanic short and long vowels, short diphthongs, and short vocalic nasals and liquids in the more important languages, viz. Greek, Sanskrit, Latin, Old Irish, Gothic, Old English, Lithuanian and Old Slavonic :—

| Indg. | Gr. | Skr. | Lat. | O.Ir. | Goth. | OE. | Lith. | O.Slav. |
|-------|----------|-------------|--------------|--------------|-----------|--------|----------|-------------|
| a | α | a | a | a | a | æ, (a) | a | o |
| e | ε | a | e, (o, i) | e, (i) | i, (aí) | e, (i) | e | e |
| i | ι | i | i | i, (e) | i, (aí) | i | i | ĩ |
| o | ο | a, (ā) | o, (u) | o, (u) | a | æ, (a) | a | o |
| u | υ | u | u | o, (u) | u, (aú) | u, (o) | u | ũ |
| ə | α | i | a | a | a | æ, (a) | a | o |
| ā | ā, (η) | ā | ā | ā | ō | ō | ō | a |
| ē | η | ā | ē | ī | ē | æ | é | ě |
| ī | ι | ī | ī | ī | ei | ī | y | i |
| ō | ω | ā | ō | ā | ō | ō | ũ | a |
| ū | υ | ū | ū | ū | ū | ū | ū | y |
| ai | αι | ē | ai, (ae) | ai, (ae) | ái | ā | ai, (ë) | ě |
| ei | ει | ē | ei, (ī) | ē, (ia) | ei | ī | ei, (ë) | i |
| oi | οι | ē | oi, (oe, ū) | oi, (oe) | ái | ā | ai, (ë) | ě |
| au | αυ | ō | au | ō, (ua) | áu | ēa | au | u |
| eu | ευ | ō | ou, (ū) | ō, (ua) | iu | ēo | au | u |
| ou | ου | ō | ou, (ū) | ō, (ua) | áu | ēa | au | u |
| ṁ | α, (αμ) | a, (am) | em | im, (am) | um | um | iñ, (im) | ę, (im) |
| ṇ | α, (αν) | a, (an) | en | in, (an) | un | un | iñ, (in) | ę, (in) |
| l | αλ, (λα) | r, (ir, ur) | ol, (ul), al | li, (al, la) | ul, (lu) | ol | iľ, (il) | ľ, (li, lř) |
| r | αρ, (ρα) | r, (ir, ur) | or, (ur), ar | ri, (ar, ra) | aúr, (ru) | or | iř, (ir) | ř, (ri, rř) |

NOTE.—From the above table are omitted numerous details for which the grammars of the separate languages should be consulted.

CHAPTER III

THE GREEK DEVELOPMENT OF THE INDO-
GERMANIC VOWEL-SYSTEM

A. THE SHORT VOWELS.

a

§ 43. Indg. **a** remained in Greek as also in the oldest periods of the other languages except Old Slavonic where it became **o**, as *ἀγρός*, Skr. *ájraḥ*, Lat. *ager*, Goth. *akrs*, *field*; *ἄγω*, Skr. *ájāmi*, Lat. *ago*, O.Ir. *agim*, *I drive, lead*, O.Icel. *aka*, *to drive*; *ἄγχω*, Lat. *ango*, cp. Goth. *aggwus*, *narrow*; *ἄλλος*, Lat. *alius*, Goth. *aljis*, *other*; *ἄλς*, Lat. gen. *salis*, O.Ir. *salann*, Goth. *salt*, O.Slav. *solī*, *salt*; *ἄμφω*, Lat. *ambo*; *ἄνεμος*, *wind*, Lat. *animus*, *mind*, O.Ir. *anim*, *soul*, Skr. *ániti*, *he breathes*, Goth. *us-anan*, *to breathe out, expire*; *ἀντί*, Skr. *ánti*, *opposite, before*, Lat. *ante*, *before*, Goth. *and*, *along, on*, Lith. *añt*, *on*; *ἄξων*, Skr. *ákṣaḥ*, Lat. *axis*, OHG. *ahsa*, Lith. *aszis*, *axle*; *ἀπό*, Skr. *ápa*, Lat. *ab*, Goth. *af*, *from, away from*; *ἀρόω*, Lat. *aro*, Goth. *arja*, Lith. *ariù*, *I plough*, cp. O.Ir. *arathar*, *plough*; *δάκρυ*, Lat. *dacruma*, *lacruma*, Goth. *tagr*, *tear*; *κάπρος*, *wild boar*, Lat. *caper*, O.Icel. *hafr*, *he-goat*; *οἶδα* = Skr. *véda*.

e

§ 44. Indg. **e** (=Skr. **a**, Lat. **e**, (**o**, **i**), O.Ir. **e**, (**i**), Goth. **i**, (**ai**), OE. **e**, (**i**), Lith. O.Slav. **e**) generally remained in Greek, as *γένος*, Skr. *jánaḥ*, Lat. *genus*, *race, generation*; *γένυς*, Skr. *hānuḥ*, *jawbone*, Lat. *gena*, Goth. *kinnus*, *cheek*; *δέκα*, Skr. *dáśa*, Lat. *decem*, Goth. *taíhun*, *ten*; *ἐγώ*, Skr. *ahám*, Lat. *ego*, Goth. *ik*, *I*; *ἔδος*, Skr. *sádaḥ*, *seat*, Lat. *sedēre*, OE. *sittan*, *to sit*; *ἔδω*, Skr. *ádmi*, Lat. *edo*, OE. *ete*, *I eat*; *ἐνος*, Skr. *sánaḥ*, Lat. *senex*, O.Ir. *sen*, Goth.

sineigs, Lith. *sėnas*, *old*; *ἔπεται*, Skr. *sácatē*, Lat. *sequitur*, *he follows*, Lith. *sekù*, *I follow*; *ἐπτά*, Skr. *saptá*, Lat. *septem*, O.Ir. *secht*, Goth. *sibun*, Lith. *septynì*, *seven*; *ἔρπω*, Skr. *sárpāmi*, Lat. *serpo*, *I creep*; *ἐστί*, Skr. *ásti*, Lat. *est*, Goth. *ist*, Lith. *ėsti*, *is*; *κλέπτω*, Lat. *clepo*, Goth. *hlifa*, *I steal*; *μέσσος*, *μέσος* from **μέθjos*, Skr. *mádhyah*, Lat. *medius*, Goth. *midjis*, *middle*; *πέντε*, Skr. *páñca*, Goth. *fimf*, Lith. *penkì*, *five*; *περί*, Skr. *pári*, *around*, *about*, Lat. *per-*, O.Ir. *er-*, Goth. *faír-*, Lith. *per-*, *through*; *τε*, Skr. *ca*, Lat. *que*, *and*; *φέρω*, Skr. *bhárāmi*, Lat. *fero*, O.Ir. *berim*, OE. *bere*, O.Slav. *berā*, *I bear*; Cret. *τρées*, Att. *τρῆς*, Skr. *tráyah*, from **tréjes*, *three*; *νέ(φ)ος*, Skr. *návah*, Lat. *novos*, *-us*, Goth. *niujis*, *new*; *ρέ(φ)ει*, Skr. *srávati*, *it flows*; *ἄγε*, Lat. *age*; *δέδορκα*=Skr. *dadárśa*; *ἔφερον*=Skr. *ábharam*, *λύκε*=Skr. *vṛka*, Lat. *lupe*; *γένεος*=Skr. *jánasah*, Lat. *generis*; *πατέρες*=Skr. *pitáraḥ*; *φέρετε*=Skr. *bháratha*, Goth. *baíriþ*, O.Slav. *berete*.

NOTE.—1. It is difficult to account for the *ι* beside *ε* in *ἴσθι*: *ἔστί*, *ἰστίη*, *ἰστιά*: *ἔστιά*, *κίρνημι*: *κεράννῃμι*, *κρίμνημι*: *κρεμάννῃμι*, *ὀριγνάομαι*: *ὀρέγω*, Hom. *πίσυρες*: Att. *τέτταρες*, *πίτνημι*: *πετάννῃμι*, *σκίδνημι*: *σκεδάννῃμι*, *χθιζός*: *χθές*, *χῆλιοι* from **χίσλιοι*: *χείλιοι* from **χέσλιοι*=Lesb. *χέλλιοι*; *ἵππος*: Lat. *equos*. In some of the above examples the *ι*:*ε* may be due to vowel-assimilation, cp. §§ 73-4.

2. *ε* became *α* before *ρ* in the dialects of Elis and Locris, as *φάργον*, *πατάρα*, *φάρην*=*ἔργον*, *πατέρα*, *φέρειν*.

3. *ε* became *ι* before guttural vowels in Boeot. Cypr. Pamph. Thessal. and some of the Doric dialects (Arg. Cret. Heracl. and Lac.), as *θιός*=*θεός*; Boeot. *φέτια*=*ἔτεα*; Cret. *ῥωντι*=Att. *ἔωσι*.

i

§ 45. Indg. *i* remained in Greek and generally also in the oldest periods of the other languages, in Latin it became *e* finally (*mare* beside *pl. maria*) and before *r* from older *s*

(gen. cineris beside nom. cinis), as δι- from *δφι-, Skr. dvi-, Lat. bi-, OE. *twi-*, *two*; Hom. *φίδμεν*, *ἰδμεν*, Skr. vidmá, OE. witon, *we know*, cp. Lat. vidēre; ἴμεν = Skr. imáh, cp. Lat. itum; Dor. acc. ἴν, *him*, Lat. Goth. is, Lith. jis, *he*; μινύθω, Skr. minómi, Lat. minuo, *I lessen*, Goth. mins, *less*; πίσσα, πίττα from *πικja, Lat. pix, Lith. pikis, *pitch*; τίς, Lat. quis, *who*?; loc. pl. τρισί, Skr. triśú, Lat. tribus, O.Ir. trib, Goth. þrim, Lith. trisè, *tribus*; ἡδιστος, Skr. svádiṣṭhaḥ, Goth. sutists, *sweetest*; ἱσταμι, ἱστημι = Skr. tiṣṭhāmi, cp. Lat. sisto; εἰμί, Skr. ásmi, Lith. esmì, *am*; ἐστί, Skr. ásti, Lith. ėsti, *is*; Dor. φέροντι = Skr. bhárantī; πόλις, πόλιν, cp. Skr. áviḥ, acc. ávim, *sheep*, Lat. turris, turrin; loc. sing. μητρὶ = Skr. mātári, Lat. māt̄re, O.Slav. materi.

o

§ 46. Indg. o (Skr. a, also ā in open syllables, Lat. O.Ir. o, (u), Goth. Lith. a, O.Slav. o) remained in Greek, as γόμφος, *nail*, *bolt*, Skr. jámbhaḥ, *tooth*, OE. *camb*, *comb*; δέδορκε = Skr. dadárša; δόμος, Lat. domus; οἷς, Skr. áviḥ, Lat. ovis, Lith. avis, *sheep*, cp. Goth. awistr, *sheep-fold*; ὀκτώ, Skr. aṣṭá, aṣṭāú, Lat. octō, O.Ir. ocht, Goth. ahtáu, *eight*; οἷς, Skr. yáḥ, *who*; dual ὄσσε, cp. Lat. oculus, Lith. akis, O.Slav. oko, *eye*; πόρκος, Lat. porcus, O.Ir. orc, OHG. farah, *pig*, *boar*; πόσις, Lith. pàts, *husband*, Skr. pátiḥ, *master*, cp. Lat. potis; πότερος, Skr. kataráh, Goth. hvapar, Lith. katràs, *which of two*?; πρό, Skr. prá, *before*, Lat. pro-, O.Ir. ro-, Goth. fra-, Lith. pra-, O.Slav. pro-; τό, Skr. tád, Goth. þat-a, O.Slav. to, *the*, *this*; λύκος = Skr. vṛkaḥ, Lat. lupus, *wolf*; γένος, Skr. jánaḥ, Lat. genus, *race*, *generation*; ζυγόν, Skr. yugám, Lat. jugum, *yoke*, Dor. φέρομεν, Skr. bhárāmaḥ, Goth. baíram, *we bear*; Dor. φέροντι, Skr. bhárantī, Lat. ferunt, Goth. baírand, *they bear*; ἔφερον = Skr. ábharam.

u

§ 47. Indg. u remained in the oldest Greek and generally also in the oldest periods of the other languages, but already at an early period it became ü in Attic and Ionic and probably also in many of the other dialects, as *ἐρυθρός*, Skr. *rudhiráh*, Lat. *ruber*, *red*; *ζυγόν*, Skr. *yugám*, Lat. *jugum*, Goth. *juk*, *yoke*; *θυγάτηρ*, Skr. *duhitár*, Goth. *daúhtar*, Lith. *duktė*, *daughter*; *κλυτός*, Skr. *śrutáh*, Lat. *in-clutus*, *renowned*; gen. *κυνός* = Skr. *śúnaḥ*, Lith. *szuñs*, cp. OE. *hund*, *hound*; *νύς*, Skr. *snušá*, Lat. *nurus*, *daughter-in-law*; *βαρύς*, Skr. *gurúḥ*, Goth. *kaúrus*, *heavy*; *δάκρυ*, Lat. *dacruma*, *lacruma*; *ῥῆδος* = Skr. *svādúḥ*; *μέθυ*, *wine*, Skr. *mádhu*, Lith. *medūs*, *honey*, OE. *medu*, *mead*.

NOTE.—1. The original u-sound seems to have been regularly preserved in the Laconian, Boeotian, Lesbian, Thessalian, Arcadian, Cyprian and Pamphylian dialects. In these dialects it is mostly represented by *ου* (sometimes also by *ο*) after the introduction of the Ionic alphabet at about the end of the fifth century B. C. In Boeotian u became ju (*ιου*) after dental explosives and λ, ν, σ.

2. We have no means of determining the approximate date at which u became ü (= the u in French *tu*) in Attic and Ionic. But it is certain that Ionic *υ* was no longer pronounced like the u in English *put* at the end of the fifth century B. C., otherwise the Boeotians, &c., would not have taken *ου* to represent their u-sound, when they adopted the Ionic alphabet. Original u must have become a front vowel (ü) in Attic at the period of the oldest inscriptions, because before γ the guttural tenuis is always represented by K and never by φ, see Meistershan, *Grammatik der att. Inschriften*, pp. 3, 22. On the other hand the Attic and Ionic change of u to ü must be older than the ū (written *ου*) which arose from older *oo*, *eo* (§ 80), otherwise this ū would have fallen together with original Indg. ū (§ 55), cp. gen. sing. *λόγου* from **λόγoo*, *γένους*, older *γένεος* from **γένεος* = Skr. *jánasaḥ*, beside *μῦς* = Skr. *múṣ*, Lat. OE. *mūs*.

§ 48. Indg. initial *u* appears as *ú*. It is difficult to account for this change unless we may assume that *u* became *ú* through the intermediate stages *ü*, *íu*, *jú* (cp. § 127), cp. the development of Old French *u* in words like NE. *use* (*júz*, northern dial. *íuz*), ME. *úsen* from O.Fr. *user* :—*ὕδρος*, *ὕδρᾱ*, *water serpent*, Skr. *udráh*, *water animal*, Lith. *údra*, *otter*; *ὑπερ*, Skr. *upári*, Lat. *s-uper*, Goth. *ufar*, *over, above*; *ὑστερος*, Skr. *úttarah*, *latter, later*.

ə

§ 49. ə, which arose from the weakening of original *ā*, *ē*, *ō* (§ 87), became *a* in all the Indg. languages, except the Aryan branch where it became *i*, as *πατήρ*, Lat. *pater*, O.Ir. *athir*, Goth. *fadar*, Skr. *pitár*, *father*; *στατός*, Lat. *status*, Skr. *sthitáh*, *standing*, Goth. *staps*, *place*; *θυγάτηρ*, Skr. *duhitár*, *daughter*; *παν-δαμάτωρ*, cp. Skr. *da-mítár*, *tamer*; *κάματος* = Skr. *śamitáh*; *ἀνεμος*: Skr. *ániti*, *he breathes*; *γενέτωρ* = Skr. *janitár*; *κρέας*, Skr. *kravíh*, *flesh, raw meat*; nom. acc. neut. pl. *φέροντα* = Skr. *bháranti*.

NOTE.—In forms like *θερός*, Skr. *hitáh*, *τίθμεν* for **τίθαμεν* : *τίθημι*; *δοτός*, Lat. *datum*, *δίδομεν* for **δίδαμεν* : *δίδωμι* the *ε*, *ο* was due to qualitative assimilation to the *η*, *ω*, but this does not account for the *ε* in the second syllable of dissyllabic heavy bases like *γενέτωρ* : Skr. *janitár*.

B. THE LONG VOWELS.

ā

§ 50. Indg. *ā* (= Skr. Lat. O.Ir. *ā*, Germanic Lith. *ō*, O.Slav. *a*) remained in all the Greek dialects except Ionic and Attic, as Dor. *ᾄδύς*, Skr. *svādúh*, Lat. *suāvis*, OS. *swōti*, *sweet*; Dor. *μᾶτηρ*, Skr. *mātár*, Lat. *māter*, O.Ir. *māthir*, OE. *mōdor*, O.Slav. *mati*, *mother*, Lith. *motė*, *wife*; Dor. *φᾱγός*, *a kind of oak*, Lat. *fāgus*, OE. *bōc-trēow*, *beech*;

Dor. φράτηρ, *member of a clan*, Skr. bhrātar-, Lat. frāter, O.Ir. brāthir, OE. brōþor, *brother*, Lith. broterēlis, *little brother*; Dor. ἔβαν, Skr. āgām, *I went*; Dor. ἑστάν, Skr. āsthām, *I stood*, Lat. stāre, *to stand*, cp. OE. stōd, *I stood*; nom. acc. sing. Dor. τιμά, τιμάν, cp. Skr. áśvā, áśvām, *mare*; ending of the third pers. dual active Dor. τᾶν = Skr. -tām.

§ 51. Indg. ā became η (=long open ē) in prim. Attic and Ionic. In the oldest historic period this η was more open than the η = Indg. ē (§ 52), the former being written H and the latter E in the oldest Ionic inscriptions. η from older ā remained in Ionic, but became ā again in Attic after ρ, ε, ι, as Dor. ἄδύς, ἵσταμι, μάτηρ, φᾶμί, ἔβαν, τιμά = Attic, Ionic ἡδύς, ἵστημι, &c. Attic πράττω, χώρᾱ, γενεά, νεανίᾱς, βίᾱ, καρδίᾱ = Ionic πρήσσω, χώρη, γενεή, νεηνίης, βίη, κραδίη. But η did not become ā after ρ in Attic when an intervening f had disappeared, as Att. κόρη, Ion. κούρη, Arcad. κόρφᾱ; Att. δέρη, Ion. δειρή, Lesb. δέρρα, from *δέρφα.

ē

§ 52. Indg. ē (= Skr. ā, Lat. Goth. ē, O.Ir. ī, Lith. ē, OE. æ, O.Slav. ě) generally remained in Greek, as ἄνημι from *ἄ-φη-μι, Skr. vāmi, *I blow*, Lith. vėjas, *wind*; Hom. ἦα, Skr. āsam, *I was*; ἡμί-, Skr. sāmī, Lat. sēmi-, *half*; acc. Ζῆν = Skr. dyām, *sky*; μήν, Lat. mēnsis, O.Ir. mí, *month*, Skr. mās-, Goth. mēna, Lith. mėnu, *moon*; πλήθω, *I am full*, Skr. prātāh, Lat. im-plētus, *full, filled*; τίθημι = Skr. dādhami, cp. Lith. dėti, *to put, place*; εἶης, Skr. syāh, O.Lat. siēs, *thou mayest be*.

NOTE.—1. In the oldest Attic and Ionic η = Indg. ē was closer than η from Indg. ā (§ 51), the former being written E and the latter H in the oldest Ionic inscriptions, as ME = Dor. μή, but ΔΗΜΟΣ = Dor. δᾶμος. The two sounds fell together in Attic in the fifth century B. C.

2. Indg. ē became a very open sound (æ) in the dialect of Elis, which was often written ā, as *μά, πατάρ* = *μή, πατήρ*. In Boeotian, Thessalian and Pamphylian it became long close ē which was written ει (§§ 12, 58) after the introduction of the Ionic alphabet in the fifth century B.C., as Boeot. Thess. *ἔθεικα, μεί*, Pamph. *Μεγάλεις* = *ἔθηκα, μή, Μεγάλης*.

ī

§ 53. Indg. ī remained in Greek and generally also in the oldest periods of the other languages, as *ἱμάς*, *leathern strap*, Skr. *sīmān*, *parting of the hair on the top of the head*, OE. *sīma*, *rope, cord*; *ἰτέα*, *willow*, Lat. *vītis*, *vine*, Lith. *výti*, O.Slav. *viti*, *to wind, plait*; *ἰός* from **ἴσος*, Lat. *vīrus*, O.Ir. *fī*, *poison*; *ἴς* = Lat. *vīs*; *πίθι*, *drink thou*, Skr. *pītāḥ*, *having drunk*, O.Slav. *piti*, *to drink*; *πι(φ)ος*, *πι(φ)ων*, Skr. *pīvan*, *fat, plump*; *κορακῖνος*, cp. Skr. *na-vīnaḥ*, *new*, Lat. *haedīnus*, Goth. *gáiteins*, *belonging to a goat*.

ō

§ 54. Indg. ō (= Skr. O.Ir. ā, Lat. and Germanic ō, Lith. ū, O.Slav. a) remained in Greek, as acc. sing. Dor. *βῶν* = Skr. *gām*; *γνωτός*, Skr. *jñātāḥ*, Lat. (g)nōtus, O.Ir. *gnāth*, *known*; *δίδωμι* = Skr. *dādāmi*; *δῶρον*, Skr. *dānam*, Lat. *dōnum*, O.Ir. *dān*, *gift*, Lith. *dūti*, O.Slav. *dati*, *to give*; *δύω*, Vedic *duvā*, *dvā*, O.Ir. *dā*, *two*; *πέπωκα*, Lat. *pōtāvi*, *I have drunk*, Skr. *pāti*, *he drinks*; *πλωτός*, *swimming*, Goth. *flōdus*, OE. *flōd*, *flood, tide*, cp. Lat. *plōrāre*, *to weep aloud*; Dor. *πός* (Att. Ion. *πούς*, the *ou* of which has never been satisfactorily explained), Skr. *pāt*, OE. *fōt*, *foot*; *ὥκός*, Skr. *āśūḥ*, *quick*, Lat. *ōcior*, *quicker*; *δῶτωρ*, Skr. *dātā*, *giver*; nom. acc. dual of *ο*-stems *λύκω* = Vedic *vṛkā*; *τέκτων*, Skr. *tākṣā*, *carpenter*; *φέρω* = Skr. *bhārāmi*; *φερέτω* = Skr. *bhāratād*, cp. O.Lat. *estōd*.

NOTE.—ō became ū (written ου) in the Thessalian dialect, as *ἔδουκε*, *γνούμα* = Att. *ἔδωκε*, *γνώμη*.

ū

§ 55. Indg. ū remained in the oldest Greek and generally also in the oldest periods of the other languages, but already at an early period it became ū in those dialects which changed u to ü (§ 47), as ἔφϋτον, Skr. ábhūtam, *ye two were*, cp. Lith. būti, *to be*; θῦμός, *courage, passion*, Skr. dhūmáh, Lat. fūmus, Lith. dūmai (pl.), *smoke*; σκῦτος, Lat. scūtum, *shield*; μῦς, Skr. mūṣ, Lat. OE. mūs, *mouse*; νῦν, Skr. OE. nū, *now*; ὀφρῦς, Skr. brūḥ, OE. brū, *eyebrow*; πύθω, *I make to rot*, Skr. pūyati, *he stinks*, Lith. púti, *to rot*, OE. fūl, *foul, rotten*; ũs, Lat. sūs, OE. sū, *sow, pig*, Skr. sū-karāḥ, *boar*.

C. THE SHORT DIPHTHONGS.

ai

§ 56. Indg. ai (= Skr. ē, Lat. O.Ir. ae (older ai), Goth. ái, OE. ā, Lith. ai, (ë), O.Slav. ě) generally remained in Greek, as αἶθω, *I burn*, Skr. édhaḥ, *firewood*, Lat. aedēs, *sanctuary*, originally *fire-place, hearth*, O.Ir. aed, *fire*, OE. ād, *funeral, pile*; αἰών, Lat. aevum, Goth. áiws, *life-time, eternity*; λαιός, Lat. laevus, *left*; σκαιός, Lat. scaevus, *left*; fem. nom. pl. ταί = Skr. té, Lat. is-tae; φέρεται, φέρονται = Skr. bháratē, bhárantē.

NOTE.—In Boeotian ai became ae in the fifth century B. C., which a century later became η, and then still later long close η (written ει).

§ 57. The combination -αιϝ- became -ā- before ε- and ι- vowels in Attic and Ionic, as δᾱήρ from *δαιϝήρ, Skr. dēvár-, Lat. lēvir, Lith. dėveris, *brother-in-law*; αἰεί, Cypr. αἰφέι, beside αἰών; κᾱεί, κλαεί from *καίϝει, *κλαίϝει, beside καίω, κλαίω; Ion. αἰίσσω, Att. ᾱττω from *αἰϝικω. Forms like κᾱώ, κλαᾱώ were new formations due to levelling out the ā in forms like κᾱεί, κλαᾱεί. In Att. αἰεί the ai was due to the influence of αἰών. See §§ 75, 125.

ei

§ 58. Indg. ei (= Skr. ē, O.Lat. ei, later ī, O.Ir. ē, (ia), OE. ī, Goth. ī (written ei), Lith. ei, (ė), O.Slav. i) remained in Greek until about the beginning of the fifth century B. C., when it became long close ē in Attic, Ionic and the milder Doric dialects, although εἰ was retained in writing. This accounts for the writing of εἰ for older εε in such forms as Att. *τρεις* from **τρέjes* = Skr. *tráyaḥ*. The old diphthongal pronunciation was still preserved at the time when vowel contraction took place in such forms as Att. *ξειδω* = *αείδω*, *νικᾶς* = *νικάεις*, as compared with *φᾶνός* = *φαεινός* from **φαφεσνός*, *νικᾶν* = *νικάειν* from **νικάεεν*. Examples are:—*δείκνυμι*, *I show*, Lat. *dīco*, *I say*, Goth. *ga-teihan*, *to tell, announce*; *εἶσι*, Skr. *ēti*, Lith. *eīti*, *eīt*, *he goes*, Lat. *īs*, *thou goest*; *λείπω*, Lith. *lėkù*, *I leave*, Goth. *leihvan*, *to lend*; *πέιθω*, Lat. *fīdo*, cp. OE. *bīdan*, *to remain*; *στείχω*, cp. OE. *stīgan*, *to rise*.

NOTE.—In Boeotian ei had become ī already in the fifth century B. C., as *αῖδω* = *αείδω*.

oi

§ 59. Indg. oi (= Skr. ē, O.Lat. oi, oe, later ū, O.Ir. oi, (oe), Goth. *ái*, OE. *ā*, Lith. *ai*, (ė), O.Slav. *ě*) remained in Greek, as *οἶδα*, Skr. *vēda*, Goth. *wáit*, OE. *wāt*, *I know*; *οἶνη*, *οἶνή*, *the one on dice*, Lat. *oinos*, *ūnus*, O.Ir. *oen*, Goth. *áins*, OE. *ān*, *one*; masc. nom. pl. *τοί*, Skr. *tē*, Goth. *pái*, OE. *pā*, Lith. *tē*, *the, these*; *λέλοιπε*, Skr. *rirēca*, *has left*, Goth. *láiht*, OE. *lāh*, *he lent*; loc. pl. *λύκοι-σι* = Skr. *vṛkē-ṣu*.

NOTE.—In Boeotian oi became oe in the fifth century B. C., which two centuries later became ū and then still later ī (written εἰ).

au

§ 60. Indg. au (= Skr. *ō*, Lat. Lith. au, O.Ir. *ō*, (ua), Goth. *áu*, OE. *ēa*, O.Slav. *u*) remained in Greek, as *αὔξω*, *αὐξάνω*, Lat. *augeo*, Goth. *áuka*, Lith. *áugu*, *I grow, increase*, cp. Skr. *ójas-*, *strength*; *αὔος* from **σαυσος*, OE. *sēar*, Lith. *saūsas*, *dry, withered*; *καυλός*, Lat. *caulis*, *stalk*; *ταῦρος*, Lat. *taurus*, *bull*; *αὔ*, *αὔ-τε*, *again*, Lat. *au-t*, *au-tem*.

eu

§ 61. Indg. eu (= Skr. *ō*, O.Lat. *ou*, later *ū*, O.Ir. *ō*, (ua), Goth. *iu*, OE. *ēo*, Lith. *au*, O.Slav. *u*) remained in Greek, as *εὔω*, Skr. *óṣāmi*, Lat. *ūro*, *I burn*; *γεύω*, *I give a taste of*, Skr. *jóṣati*, *he tastes*, Goth. *kiusan*, OE. *cēosan*, *to choose*; *πεύθομαι*, *I inquire*, Skr. *bódhati*, *he is awake, learns*, Goth. *ana-biudan*, *to order, command*, OE. *bēodan*, *to offer*; *ζεύγμα* = Lat. *jumentum*, *νεῦμα* = Lat. *nūmen*, voc. *Ζεῦ πάτερ* = Lat. *Jūpiter*.

ou

§ 62. Indg. ou (= Skr. *ō*, O.Lat. *ou*, later *ū*, O.Ir. *ō*, (ua), Goth. *áu*, OE. *ēa*, Lith. *au*, O.Slav. *u*) remained in the oldest period of the language, but in Attic and Ionic it became *ū* through the intermediate stage of long close *ō* in the fifth century B.C., although the *ou* was retained in writing. This accounts for the writing of *ou* for older *oo* in such forms as gen. *ἵππου* from older **ἵπποο* (§ 325) and in *ἵππους* from older *ἵππους* (§ 69). From our knowledge of the other Indg. languages the diphthong *ou* must have been fairly common in the parent language, but in Greek there are only a few words which contain it, as *ἀκούω*, Goth. *háusja*, *I hear*. It occurred originally especially in the perfect active singular of verbs which have *-eu-* in the present stem-forms and in nouns related to such verbs, as

Hom. εἰλήλουθε : fut. ἐλεύσομαι from *ἐλεύσομαι; σπουδή: σπύδω; but in verbs like κεύθω, τεύχω, φεύγω the perfect active κέκευθα, τέτευχα, πέφευγα for *κέκουθα, &c., was formed direct from the present, see § 518.

D. THE LONG DIPHTHONGS.

§ 63. The parent language had the same number of long as of short diphthongs, but the history of the former in the separate languages differs materially from that of the latter. The second element of long diphthongs often disappeared medially before consonants (especially *m*), and also finally, as acc. sing. Hom. and Dor. βῶν = Skr. *gām* beside nom. *gāúh*; ὀκτώ, Lat. *octō*, Skr. *aṣṭāú* beside *aṣṭá*, Goth. *ahtáu*, Indg. **oktōu*. The exact conditions under which the second element remained or disappeared have never been ascertained. When the second element was preserved in the European languages, the first element was regularly shortened before a following consonant, as Ζεύς from *Ζῆύς = Skr. *dyāúh*, *sky*; λύκοις, Lat. *lupīs*, Lith. *vilkaĩs*, beside Skr. *vṛkāih*. When the second element of a long diphthong disappeared or when the first element was simply shortened, the resultant long vowel or short diphthong had the same further development in the different languages as the original simple long vowels or short diphthongs.

āi: Opt. δρᾶιμεν from *δρᾶιμεν, beside indic. ἔδρᾶμεν; Θηβαι-γενής, μεσαι-πόλιος; dat. sing. χώρᾳ, θεᾷ, cp. Skr. *sénāyāi*, to an army, Lat. *mensae*, Osc. *deivái*, *dīvae*, Goth. *gibái*, to a gift, Lith. *raĩkai*, to a hand.

ēi: Opt. γραφείμεν from *γραφειμεν, beside indic. ἐγράφην; aor. ἔλειψα from *ἔληιψα = Skr. *árāikṣam*, Indg. **élēiqsm* (cp. § 507); θη-λή, θήσθαι, cp. Lat. *fē-mīna*, *fē-lāre*, root *dhēi-*, *suckle*.

ōi: λύκοις, Lat. *lupīs*, Lith. *vilkaĩs*, beside Skr. *vṛkāih*;

opt. γνοίμεν from *γνῶιμεν, beside indic. ἔγνωμεν; dat. sing. λύκῳ, Lat. lupō, Lith. vilkui, beside Skr. vṛkāya (with the enclitic particle -a), cp. Skr. dat. sing. tásmai, him.

āu: ναῦς beside Skr. nāūh, ship; loc. pl. ναυσί, Skr. nāuṣū.

ēu: Ζεύς from *Ζηύς = Skr. dyāūh, sky; ἔξευξα = Skr. āyāukṣam, Indg. *éjēuqsm̥ (cp. § 507); acc. Ζῆν = Skr. dyām.

ōu: βούς from *βῶύς = Skr. gāūh; acc. Dor. βῶν = Skr. gām; dual of o-stems λύκω = Skr. vṛkāu beside vṛkā; πλωτός, cp. OE. flōd, flood, tide, beside Lith. pláuju, I rinse.

E. THE VOCALIC NASALS AND LIQUIDS.

§ 64. The vocalic nasals and liquids, generally written *m̥, n̥, l̥, r̥* in order to distinguish them from the corresponding consonants *m, n, l, r*, occurred originally in unaccented syllables only. They arose in the parent Indg. language through the loss of a preceding (rarely following) vowel. This loss was caused by the shifting of the principal accent from the syllable originally containing the vowel to some other syllable in the word. Then consonantal *m, n, l, r* became vocalic just in the same manner as consonantal *i* and *u* in the combinations *ei* and *eu* became vocalic after the loss of *e* in such words as ἔλιπον: λείπω, ἔφυγον: φεύγω, so also φρασί: φρένες, ἔπαθον: πένθος, ἔδρακον: δέркоμαι. But already in the parent language or at least in the prehistoric period of all the Indg. languages, the vocalic nasals and liquids came analogically to have the principal accent in certain words, as ἐπτά, Skr. sapṭá, Lat. septem, from *septm̥, older *séptm̥, seven; λύκος, Skr. vṛkaḥ, Lat. lupus, Goth. wulfs, Lith. vilkas, from *wl̥qos, older *wl̥qós.

1. Short Vocalic Nasals.

§ 65. In Greek and Sanskrit m , n had a twofold development according to their position in the word :—

1. Finally and before consonants except semivowels they became **a** in these two languages, and in Lat. **em**, **en**, Germanic **um**, **un**, Lith. **iĩ** (**im**), **iĩ** (**in**), O.Slav. **ę**, (**im**, **in**), as *δέκα*, Skr. *dāśa*, Lat. *decem*, Goth. *taíhun*, from **dékm̥*, beside Lith. *dēsimt̃*, O.Slav. *deset̃*, from **dékm̥t̃* *ten*; *ἐκατόν*, Skr. *śatám*, Lat. *centum*, Goth. *hund*, from **kmtóm*, *hundred*; *βάσις*, Skr. *gátiḥ*, *gait̃*, *step*, Goth. *ga-qum̥ps*, *assembly*, from **gm̥tis*; *ἄπαξ*, Skr. *sa-kṣ̥t̃*, *once*, Lat. *sim-plex* older **semplex*, from **sm̥*: *έν* from **sem*, *one*; acc. sing. of consonantal stems as *πόδα*, *φέροντα*, Lat. *pedem*, *ferentem*; Hom. *ἦα* from **és̥m̥*, *I was*.

τατός, Skr. *tatáḥ*, Lat. *tentus*, from **tntós*, *stretched*; *δαύς*, Lat. *densus*; *φατός*, Skr. *hatáḥ*, *killed*: *φόνος*; *ἄγνωτος*, Skr. *á-jñātaḥ*, Goth. *un-kun̥ps*, *unknown*, from **ḡ*: **ne*, *not*; *ὄνομα*, Skr. *nāma*, Lat. *nōmen*, *name*; acc. pl. of consonantal stems, as *πόδας*, Skr. *pádaḥ*, Lat. *pedēs* from **pedens*, Goth. *fōtuns*, *feet*; loc. pl. of *n*-stems, as *φρασί*: *φρένες*, in this case the regular development was almost entirely obliterated in Greek by new formations formed after the analogy of the other cases, as *ποιμέσι* for **ποιμάσι*, *κυσί* for **κνασί* = Skr. *śvásu* (§ 345); *μεμάτω* = Lat. *mementō*; Hom. *ἡται*, Skr. *ásatē*, from **és̥ntai*, *they sit*; *πέφαται*: *φόνος*, and similarly *γέγαμεν*, *μέμαμεν*, *ἐπαθον*: *γέγονα*, *μέμονα*, *πέπονθα*.

2. Before vowels and semivowels m , n became **am**, **an** in Greek and Sanskrit, but in Lat. Germanic and Lith. they had the same development as in 1. Some scholars maintain that the original vowel did not entirely disappear in these positions, but that it merely became reduced in quality. Instead of m , n they accordingly write **em**, **en** and assume that the **e** became **a** in Greek and Sanskrit

and the consonants **m**, **n** remained. Other scholars write the sounds in question as **ṃm**, **ṇn** before vowels and **ṃ**, **ṇ** before semivowels. The correct interpretation of the development is probably that the off-glide of the nasal remained consonantal, and that this eventually became a full nasal consonant, cp. the consonantal off-glide in NE. *seldm̃ iz, seldom is, ritṇ it, written it*.

ἀμο- (in ἀμόθεν), Skr. *sama-*, Goth. pl. *sumái*, from **sm̃o-*, *some one, any one*; ταμείν : τέμνω.

τανύ- (in τανύ-δρομος, τανύ-πους), Skr. *tanúh*, Lat. *tenuis*, OHG. *dunni*, from **tṇu-*, *stretched, thin*; Boeot. βανά, Vedic *ganā-*, O.Icel. *kona*, from **gṇā-* : Goth. *qinō*, *woman*; ἀνυδρος, Skr. *anudráh*, *waterless*; τάννυται = Skr. *tanutē*; κτανεῖν : κτείνω from **κτενῖω*.

Hom. *ικάνω* from **ικανῶ*; μᾶνός, μανός, from **μανῆός*. -αμῖ- and -ανῖ- became -αιν- (§ 75), as βáινω from **βανῖω*, older **βαμῖω*, Lat. *venio* from **gwenjō*, older **gwm̃jō*, Indg. **gm̃jō*, cp. Skr. opt. *gamyât*, *he may go*. καίνω from **κανῖω*; and similarly κταίνω, μαίνομαι, ποιμαίνω, ὀνομαίνω, πεπαίνω, σπερμαίνω.

2. Short Vocalic Liquids.

§ 66. Many points connected with the development of the Indg. vocalic liquids in the various languages have never been definitely settled. The vowel which was developed before or respectively after liquids in the prehistoric period of the European languages seems to have been unstable in quality, when it was preceded or followed by a labial or guttural. In Greek, Latin, Keltic and the Baltic-Slavonic languages the vowel sometimes appears in this position as **u**, as in Gr. *λύκος*, Lat. *lupus*, O.Slav. *vlūkŭ*, beside Skr. *vṛkaḥ*, Indg. **wl̥qos*, *wolf*; φύλλον from **φυλ̥jon*, beside Lat. *folium*; ἄγυρις : ἀγείρω. For further examples, see Brugmann's *Grundriss*, &c., vol. i, second ed., pp. 453-5. It will also be noticed from the normal development of the vocalic

liquids given below that the vowel sometimes appears before and sometimes after the liquid. The reason for this twofold development is unknown. In Greek *λα, ρα* beside *αλ, αρ* only occur before consonants. In all other positions we have *αλ, αρ*. Various attempts have been made by scholars to account for the difference in the position of the vowel, but they all leave a large residuum of unexplained forms.

§ 67. In several languages *l, r* had a twofold development according to their position in the word:—

1. Before consonants. In this position they became in Gr. *αλ, λα; αρ, ρα*, Skr. *ṛ*, Lat. *ol, ul; or, ur*, prim. Germanic *ul, ur* (rarely *lu, ru*) = Goth. *ul, aúr*, but *ol, or* in the other Germanic languages, Keltic *li, ri*, prim. Baltic-Slavonic *il, ir*, as *πλατύς*, Skr. *pr̥thúḥ*, *broad*, OE. *folde*, Skr. *pr̥thiví*, *earth*; *-πίπλαμεν*, Skr. *pip̥māḥ*, *we fill*; *τέταλμαι*: *τέλλω*; *ἔσταλμαι*, *στάλσις*: *στέλλω*; *ἐκλάπην*: *κλέπτω*. *σκάλλω* from **σκαλῶ*, *I stir up*, Lith. *skiliù*, *I strike fire*, Indg. **sq̌ljō*; and similarly *βάλλω*, *πάλλω*, &c.

καρδίᾱ, Ion. *κραδίη*, Lat. *cor* (gen. *cordis*), O.Ir. *cride*, Lith. *szirdis*, *heart*; *ἔδρακον* = Skr. *ádṛṣam*: *δέρκομαι*; *θαρσύς*, *θρασύς*: Aeol. *θέρσος*, cp. Skr. *dhṛṣṇóti*, *he dares*, Goth. *ga-daúr-san*, *to dare*; *κράνος*, *κράνον*, Lat. *cornus*, *cornum*, *cornel-tree*; *τέταρτος*, Hom. *τέτρατος* from **τέτφρατος*, Lith. *ketviřtas*, *fourth*; *ἄρσην*: Ion. *ἔρσην*; *θάρσος*, *κράτος*: Aeol. *θέρσος*, *κρέτος*; loc. pl. *πατράσι*, Skr. *pit̥ṣu*, OE. *fæderum*, *to fathers*; *δαρτός*, *δρατός*, *δεδαρμένος*: *δέρω*; and similarly *ἔπραθον*, *ἔσπαρμαι*, *πέπαρμαι*, *κάρσις*, *ταρσός*, *τραπείν*, *τραφεῖν*: *πέρθω*, *σπείρω*, *πείρω*, *κείρω*, *τέρσομαι*, *τρέπω*, *τρέφω*. The combination *-arj-* became *-air-* (§ 75), as *σπαίρω* from **σπαρῶ*, *I struggle convulsively*, Lith. *spiriù*, *I push with the foot*; and similarly *ἐχθαίρω*, *πταίρω*, *σκαίρω*, *χαίρω*, *θαιρός* from **θφαρjos*, Indg. **dhw̑rjos*.

2. Before vowels *l, r* (cp. § 65, 2) became in Gr. *αλ, αρ*,

Skr. *ul* (= Indg. *l*), *ur*, *ir* (= Indg. *l*, *r*), Lat. *al*, *ar*, Keltic *al*, *ar*, Germanic and Baltic-Slavonic as in *r*, as *τάλας*, *enduring*, Skr. *tuḷā*, *balance*, *scale*, O.Ir. *talla*, *he takes away*, Goth. *þulan*, OE. *þolian*, *to suffer*, *endure*; *παλύνω*, *I strew*, Lat. *palea*, *chaff*; *καλιὰ*, Skr. *kuḷāyam*, *hut*, *nest*; *βαλεῖν*, *ἐστάλλην* : *βέλος*, *στέλλω*.

βαρύς, Skr. *gurūḥ*, Goth. *kaúrus*, Indg. **grús*, *heavy*; *πάρος*, Skr. *puráḥ*, Goth. *faúra*, OE. *fore*, *before*; *κάρα*, Skr. *śiras*, *head*; *ἐδάρην*, *πταρμός* : *δέρω*, *πτόρος*.

Examples of final *r* in Greek are: *ἦπαρ*, Skr. *yakṛt*, Lat. *jecur*, *liver*; *ἦμαρ* : *ἡμέρα*; *ἔαρ* from Indg. **wesr*.

3. Long Vocalic Nasals and Liquids.

§ 68. Whilst all scholars agree that the parent Indg. language possessed short vocalic nasals and liquids, there is considerable difference of opinion as to whether long vocalic nasals and liquids existed in the parent language. Just as *i*, *u*, *m̄*, *n̄*, *l̄*, *r̄* arose from the weakening and eventual loss of *e* in the diphthongs *ei*, *eu*, *em*, *en*, *el*, *er*, and as *ī*, *ū* arose from the weakening and eventual loss of *e* in the combinations *ejə*, *ewə*, it can be assumed upon theoretical grounds that *m̄*, *n̄*, *l̄*, *r̄* arose in the parent language from the weakening and eventual loss of *e* in the combinations *emə*, *enə*, *elə*, *erə*, where *ə* represents the weakening of *ā*, *ē*, or *ō* (§ 87). But whereas *ī* and *ū* regularly appear in the oldest stages of all the Indg. languages, no language has preserved a long vocalic nasal or liquid in historic times. Notwithstanding the above parallels the subject still requires further investigation before it can be established with any degree of certainty that these sounds existed in the parent language. Most of the forms which are supposed to represent a long vocalic nasal or liquid in Greek, Latin and Keltic admit of an entirely different explanation, viz. as being dissyllabic heavy bases with loss of vowel in the first syllable and preservation of an original long vowel in

the second syllable (§ 90), as **gnātós* from the base **genā-*, whence Lat. (*gnātus*, *born* : *genitor*, but this would not account for Skr. *jātāh*, *born*, *begotten*, which presupposes an original form **gñtós*; **dhwnātós*, whence Dor. *θνᾶτός*, Att. Ion. *θυητός*, beside *θάνατος* from **dhwnētós*; **grōtēr* from the base **gerō-*, whence Gr. *βρωτήρ*, beside *βάραθρον* from **grēdhrom*. But this explanation of the Greek and Latin forms would not account for the equivalents in Sanskrit, Germanic and the Baltic-Slavonic languages. From what has been said above it will be seen that the whole subject is at present beset with unsolved difficulties. Brugmann, *Kurze vergleichende Grammatik*, pp. 121-38, regards the following as the normal development of the long vocalic nasals and liquids in the various languages. For the treatment of the whole subject from an entirely different standpoint, the student should consult Hirt, *Der indogermanische Ablaut*.

| Indg. | Gr. (Dor.) | Skr. | Lat. | Keltic | Germanic | Lith. |
|-----------|-----------------|-------------------------|--------------|------------|-----------------|--------------|
| \bar{m} | $\mu\bar{a}$ | \bar{a} , $\bar{a}m$ | $m\ \bar{a}$ | $m\bar{a}$ | um | \acute{im} |
| \bar{n} | $\nu\bar{a}$ | \bar{a} , $\bar{a}n$ | $n\bar{a}$ | $n\bar{a}$ | un | \acute{in} |
| \bar{l} | $\lambda\omega$ | $\bar{i}r$, $\bar{u}r$ | $l\bar{a}$ | $l\bar{a}$ | ul , (lu) | \acute{il} |
| \bar{r} | $\rho\omega$ | $\bar{i}r$, $\bar{u}r$ | $r\bar{a}$ | $r\bar{a}$ | ur , (ru) | \acute{ir} |

NOTE.— \bar{m} , \bar{n} regularly became $\bar{a}m$, $\bar{a}n$ before a following y in Sanskrit.

Examples are: *νέο-δμᾶτος*, *-δητος*, *new-built*, Lat. *mā-teriēs*, from **dmā-* : *δέμω*; *δητηήρ*, *δηητός*, from **dmā-*, Skr. *dāmyati*, *he tames* : Lat. *domitor*, *domitus*.

κνήμη, older **κνᾶμᾶ*, *shin-bone*, *leg*, O.Ir. pl. *cnāmai*, *bones*; *νῆσσα* from older **νᾶσσα*, *duck*, Skr. *āṭī*, *a kind of aquatic bird* : Lat. gen. *anatis*, Lith. *antis*, *duck*; Skr.

jātáḥ, Lat. (g)nātus, *born*, Goth. *airþa-kunds*, *born of the earth*: Lat. *genitor*.

βλωθρός, *tall*, Skr. *mūrdhān-*, *height, head*; Skr. *úrṇā*, Lat. *lāna*, OE. *wulle*, Lith. *vılna*, from *wīnā, *wool*: Gr. *οὔλος* from *folnos, *thick, fleecy*; Skr. *pūrṇāḥ*, *filled*, O.Ir. *lān*, Lith. *pılnas*, *full*.

βρωτήρ, *devourer*, Skr. *gīrṇāḥ*, *swallowed up*, Lith. *girtas*, *drunken*; *στρωτός*, Lat. *strātus*, Skr. *stīrṇāḥ*, *spread, strewn*; Dor. Ion. *τετρώ-κοντα*, Lat. *quadrā-gintā*; *πρῶτος* from *prōfatos, Skr. *pūrvyāḥ*, *first*.

THE LENGTHENING OF SHORT VOWELS.

§ 69. Short vowels were often lengthened through the loss of a following consonant. This process is sometimes called compensation lengthening. In Att. and Ion. *e* became long close *ē* (written *ει*, see § 58), and *o* became *ū* (written *ου*, see § 62) through the intermediate stage of long close *ō*. In Dor. they became *η* and *ω*. The following are the principal cases in which short vowels were lengthened:—

1. In final or medial syllables in Attic and Ionic through the loss of a nasal before a following *s* whether original or developed from some other source, the long vowel having passed through the intermediate stage of a long nasalized vowel, as *εῖς* from *sems, Cret. *ἔvs*. Masc. nom. sing. *μέλās*, *τάλās*, from *μέλans, *τάλans. Acc. pl. *τιμās*, Cret. *-ans*; *λύκους*, Cret. *-ous*, Goth. *wulfans*; Heracleian *τρίς* (Att. Ion. *τρεῖς* was the nom. used for the acc.), Cret. *τρίns*, Goth. *prins*. Masc. nom. sing. *γίγās*, *τιθείς*, *χαρίεις* (cp. Skr. *pad-vānt-*, *having feet*), *διδούς*, from *γίγανts, *τιθένts, *χαρίφενts, *διδόνts. *πᾶσα* from *παντја; *μοῦσα*, Dor. *μῶσα*, from *μονтја; *φέρουσι* = Dor. *φέροντι*, Skr. *bhārantī*, Goth. *baírand*; fem. participle *φέρουσα*, from *φέρονтја, see § 129, 6. The same lengthening also occurs through the loss of a nasal in the combination Ion. *-āss-*, Att. *-ātt-*, from older *-agχj-* (§ 156), as Ion. *ἄσσουν*

from **ἄνσσον*, older **ἀγχχόν*, cp. *ἄγχι*; Ion. *ἐλάσσω*, Att. *ἐλάττων*, from **ἐλαγχχών*; Ion. *θάσσω*, Att. *θάττων*, from **θαγχχών*.

2. *s* in the combination *ms*, *ns* + vowel became voiced and then became assimilated to the preceding nasal. The long (double) nasal remained in Lesbian, but in the other dialects it was shortened or simplified and the preceding vowel was lengthened by transferring the long quantity of the consonant to the vowel, as gen. Att. Ion. *χηνός*, Dor. *χᾶνός*, cp. Skr. *hṣá-*, Lat. *anser* for older **hanser*, Germ. *gans*, *goose*; aorist Att. Ion. *ἔφηνα*, Dor. *ἐφᾶνα*, from **ἔφανσα*; Att. Ion. *ἔμεινα*, Dor. *ἐμνηα*, Lesb. *ἔμεννα*, from **ἔμενσα*; Att. Ion. *ἔνειμα*, Dor. *ἐνημα*, Lesb. *ἐνεμμα*, from **ἐνεμσα*; *ἔκρινα* from **ἔκρινσα*. *νίσομαι* from **νίνσομαι*.

3. *vj*, *ρj* became *νν*, *ρρ* which remained in Lesbian, but became simplified in Att. Ion. with lengthening of the preceding *ε*, *ι*, *υ*, cp. 2, as Att. Ion. *κτείνω*, *φθείρω*, Lesb. *κτέννω*, *φθέρρω*, from **κτένjω*, **φθέρjω*; *πεῖρα* from **περjα*; Att. Ion. *κλίνω*, *οἰκτίρω*, *I pity*, Lesb. *κλίννω*, *οἰκτίρρω*, from **κλίνjω*, **οἰκτίρjω*; *δτρύνω* from **δτρύνjω*. See § 129, 4.

4. *s* in the combination *s* + liquid or nasal became voiced and then became assimilated to the following liquid or nasal. The long (double) consonant remained in Lesbian, but was simplified in the other dialects with lengthening of the preceding vowel, cp. 2, as Ion. *τρήρων* from **τρᾶσρων*; Att. Ion. *χείλιοι*, Lesb. *χέλλιοι*, cp. Skr. *sa-hásram*, *thousand*; Att. Ion. *σελήνη*, Dor. *σελᾶνᾶ*, Lesb. *σελάννᾶ*, from **σελᾶσνᾶ*; Att. Ion. *ήμεῖς*, Dor. *ἄμές*, Lesb. *ἄμμες*, from **ἄσμε* = Skr. *asmá-*, Indg. **ṇs-me*; *εἰμί*, Dor. *ἡμί*, Lesb. *ἐμμί* = Skr. *ásmi*, Indg. **esmi*; Att. *φᾶνός*, Ion. *φαεινός*, Lesb. *φάεννος*, from **φαφεσνός*; *ἔλαος*, Lesb. *ἔλλαος*, from **σισλαφος*.

5. Intervocalic *σf* disappeared with lengthening of the

preceding vowel, as Dor. *νᾱός*, Ion. *νηός*, Att. *νεώς* (§ 72), from **νασφός*; Hom. *τελήεις*, *τέλειος*, from **τελεσφεντς*, **τελεσφος*; *ἰός* from **ἰσφος*.

6. -λν- became -λλ- by assimilation, which remained in Lesbian and Thessalian, but in the other dialects the long (double) consonant was simplified with lengthening of the preceding vowel, cp. 2, as Att. Ion. *στήλη*, Dor. *σῑᾶλλᾱ*, Lesb. *σῑᾶλλᾱ*, from **σταλνᾱ*; Hom. *εἴλομαι* from **φελνομαι*; *ὀφείλω* from **φοφελνω*; *βουλή*, Lesb. *βόλλᾱ*, from **βολνᾱ*; *βούλομαι* from **βολνομαι*. See § 148.

7. Short vowels were lengthened in Ionic, but not in Attic, with the loss of *ɸ* in the combinations *νɸ*, *λɸ*, *ρɸ*, as Ion. *φθάνω*, Att. *φθάνω*, from **φθάνɸω*; Ion. *κᾱλός*, Att. *καλός*, Dor. *καλφός*; Ion. *κούρη*, Att. *κόρη*, Dor. *κόρῑᾱ*; and similarly Ion. *εἵνατος*, *στεινός*, *ξείνος*, *τίνω*, *φθίνω*, *δουρός*, *οὔρος*, *γοῦνα*, beside Att. *ἔνατος*, *στενός*, *ξένος*, *τίνω*, *φθίνω*, *δορός*, *ῥος*, *γόνατα*. See § 124, 6.

THE SHORTENING OF LONG VOWELS.

§ 70. Long vowels were shortened in prim. Greek before a following nasal, liquid, or semivowel + consonant, as third pers. plural *ἔβαν* from **ἔβᾱντ*, *ἔτλαν* from **ἔτλᾱντ*, *ἔμιγεν* from **ἐμίγειντ*, *ἔγνον* from **ἔγνωντ*, *ἔφυν* from **ἔφῠντ*, beside first pers. sing. *ἔβην*, Dor. *ἔβᾱν*, *ἔτλην*, Dor. *ἔτλᾱν*, *ἐμίγην*, *ἔγνων*, *ἔφῠν*; forms like Hom. *πλήντο*, *ἀνηται*, *ἐμπλήντο* for **πλαντο*, **ἀενται*, **πλεντο* were new formations with the long vowel levelled out from the other persons; acc. pl. *χώρᾱς* from *-ανς* (§ 69), older *-ᾱνς*; *μεῖς*, *month*, from **μένς*, older **μήνς*, cp. Lesb. gen. *μῆννος* from **μήνσος*; *πτέρνα* from **πτηρσνα*, cp. Skr. *pārṣṇīh*, *heel*; in participles like *ἀέντ*-, *γνόντ*- from **ἄφηντ*- (cp. *ἄησι*, Skr. *vāti*, *he blows*), **γνώντ*-. For examples of the shortening of long vowels before a semivowel + consonant, see § 63.

§ 71. Long vowels were shortened before long vowels especially in Attic and Ionic and partly also in Doric.

There was also a tendency to shorten them before short vowels in Ionic and Doric, but the exact conditions under which the shortening took place are difficult to determine, see Brugmann, *Griech. Grammatik*, pp. 56-7. Examples are :—*ἔως*, Hom. *ῥός*; Lesb. *αῦως* from **ἄνσως*, cp. Lat. *aurōra*; *θά̃*, Dor. *θα̃*; Att. *νεῶν*, Hom. *νηῶν*, Skr. *nāvām*; Att. *βασιλέων*, Hom. *βασιλήων* from *-ηφων*. Ion. Dor. *βασιλέος* beside Hom. *βασιλήος*.

§ 72. The combinations *ηο*, *ηᾶ* became *εω*, *εᾶ* in prim. Attic and Ionic, but in later Ionic the law was greatly obscured by various new formations due to analogy and by dialectal differences within Ionic itself, as gen. Att. *νεός*, Hom. *νηός*, Skr. *nāvāḥ*; *βασιλέως*, Hom. *-ῆος*, Cyprian *-ῆφος*; *πόλεως*, Hom. *πόληος*; nom. *λεός*, *νεός*, Hom. *λαός*, Dor. *ναός*; acc. *βασιλέᾶ*, Hom. *βασιλήα*. Hom. *στέωμεν*, *τέως* beside *στήομεν*, *τῆος*.

ASSIMILATION OF VOWELS.

§ 73. The vowel in an originally unaccented syllable was often assimilated either partially or entirely in quality to the vowel of the following syllable. The examples occur mostly on inscriptions in the various dialects, and show how valuable inscriptional forms are for philological purposes as compared with the forms in ordinary literature.

α to *ε* before a following *ε*, as Att. *ἔρετή* beside *ἀρετή*; *ἐγγέλυος* from **ἀγγέλυος*, cp. Lat. *anguilla*; Boeot. *τρεπεδδα*, cp. Att. *τράπεζα*.

α to *ε* before a following *ο* and *ω*. This assimilation of *α* to *ε* probably took place in prim. Greek, but owing to levelling the *α* was mostly restored again, cp. *ἡβέω* beside *ἡβάω* with *α* from *ἡβάεις*, &c., and conversely *ἡβέεις*, *ἡβέει* with *ε* from *ἡβέω*, *ἡβέομεν*; Hom. *μενοίνεον* : *μενοινάα*, *ὁμόκλεον* : *ὁμόκλα*, *οὔδεος* : *οὔδας*; Herod. *ὄρέω* : *ὄρᾶς*; and similarly on inscriptions of the Cretan, Elean and North-Western dialects.

α to o before a following o and ω , as $\delta\omicron\chi\mu\acute{o}s$ from * $\delta\alpha\chi\mu\acute{o}s$; $\kappa\omicron\chi\acute{o}\nu\eta$ from * $\kappa\alpha\chi\acute{o}\nu\eta$; $\delta\acute{\mu}\omicron\rho\gamma\gamma\acute{\nu}\mu\iota$, cp. $\acute{\alpha}\mu\acute{\epsilon}\rho\gamma\omega$; Att. $\delta\acute{\rho}\rho\omega\delta\epsilon\acute{\iota}\nu$ beside Ion. $\acute{\alpha}\rho\rho\omega\delta\epsilon\acute{\iota}\nu$; $\sigma\omicron\rho\omega\nu\acute{\iota}s$ beside $\sigma\alpha\rho\omega\nu\acute{\iota}\delta\epsilon s$; $\sigma\omicron\phi\acute{o}s$ beside $\sigma\acute{\alpha}\phi\alpha$; Arcad. $\acute{\epsilon}\kappa\omicron\tau\acute{o}\nu$ from $\acute{\epsilon}\kappa\alpha\tau\acute{o}\nu$.

ϵ to α before a following α , as late Att. $\lambda\alpha\kappa\acute{\alpha}\nu\eta$ = $\lambda\epsilon\kappa\acute{\alpha}\nu\eta$; Att. $\Sigma\acute{\alpha}\rho\alpha\pi\iota s$ beside $\Sigma\acute{\epsilon}\rho\alpha\pi\iota s$; Corinth. $\Phi\alpha\kappa\acute{\alpha}\beta\tilde{\alpha}$, Att. $\acute{\epsilon}\kappa\acute{\alpha}\beta\eta$; Heracl. gen. $\chi\alpha\rho\acute{\alpha}\delta\epsilon\omicron s$, cp. Hom. nom. $\chi\acute{\epsilon}\rho\alpha\delta\omicron s$; Arcad. $\mathcal{M}\alpha\lambda\alpha\gamma\kappa\acute{o}\mu\tilde{\alpha}s$ beside $\mathcal{M}\epsilon\lambda\alpha\gamma\kappa\acute{o}\mu\tilde{\alpha}s$; $\psi\alpha\kappa\acute{\alpha}s$ beside $\psi\epsilon\kappa\acute{\alpha}s$.

ϵ to o before a following o and ω , as $\delta\acute{o}\beta\omicron\lambda\acute{o}s$, $\delta\acute{\rho}\omicron\beta\omicron s$ = $\delta\beta\epsilon\lambda\acute{o}s$, * $\acute{\epsilon}\rho\omicron\beta\omicron s$; $\acute{\omicron}\rho\chi\omicron\mu\epsilon\nu\acute{o}s$ beside $\acute{\epsilon}\rho\chi\omicron\mu\epsilon\nu\acute{o}s$; $\mathcal{T}\omicron\rho\acute{\omega}\nu\eta$, $\mathcal{T}\rho\omicron\phi\acute{\omega}\nu\iota\omicron s$ beside $\mathcal{T}\epsilon\rho\acute{\omega}\nu\eta$, $\mathcal{T}\rho\epsilon\phi\acute{\omega}\nu\iota\omicron s$.

ϵ to o before a following υ , as $\gamma\acute{o}\rho\gamma\upsilon\tau\alpha$ from * $\gamma\acute{\epsilon}\rho\gamma\upsilon\tau\alpha$; $\kappa\rho\acute{o}\mu\upsilon\omicron\nu$ beside $\kappa\racute{\epsilon}\mu\upsilon\omicron\nu$ (Hesych.); $\delta\acute{\rho}\omicron\gamma\upsilon\iota\alpha$, cp. $\delta\acute{\rho}\epsilon\gamma\omega$; $\delta\acute{\delta}\acute{\upsilon}\rho\omicron\mu\alpha\iota$ from * $\acute{\epsilon}\delta\acute{\upsilon}\rho\omicron\mu\alpha\iota$; $\mathcal{K}\acute{\omicron}\rho\kappa\bar{\upsilon}\tau\alpha$ beside $\mathcal{K}\acute{\epsilon}\rho\kappa\bar{\upsilon}\tau\alpha$.

o to α before a following α , as $\acute{\alpha}\sigma\tau\alpha\kappa\acute{o}s$, $\acute{\alpha}\sigma\tau\alpha\phi\acute{\iota}s$ = $\delta\sigma\tau\alpha\kappa\acute{o}s$, $\delta\sigma\tau\alpha\phi\acute{\iota}s$.

ι to υ before a following υ , as Att. inscription $\eta\mu\upsilon s\upsilon s$ = $\eta\mu\iota s\upsilon s$; $\mathcal{K}\upsilon\nu\delta\upsilon\epsilon\acute{\upsilon}s$ beside $\mathcal{K}\iota\nu\delta\upsilon\epsilon\acute{\upsilon}s$.

υ to ι before a following ι , as $\beta\iota\beta\lambda\acute{\iota}\omicron\nu$ from $\beta\upsilon\beta\lambda\acute{\iota}\omicron\nu$.

For a detailed treatment of vowel assimilation in Greek see J. Schmidt, *Kuhn's Zeitschrift*, vol. xxxii, pp. 321-94.

§ 74. The change of α to ϵ after ι and υ is also due to partial assimilation in such double forms as $\acute{\iota}\epsilon\rho\acute{o}s$, $\sigma\kappa\iota\epsilon\rho\acute{o}s$, $\sigma\acute{\iota}\epsilon\lambda\omicron\nu$, $\psi\acute{\iota}\epsilon\theta\omicron s$, $\chi\lambda\iota\epsilon\rho\acute{o}s$, $\phi\iota\acute{\epsilon}\lambda\eta$, $\pi\iota\acute{\epsilon}\acute{\zeta}\omega$, $\pi\acute{\upsilon}\epsilon\lambda\omicron s$, $\acute{\upsilon}\epsilon\lambda\omicron s$, beside $\acute{\iota}\alpha\rho\acute{o}s$, $\pi\acute{\upsilon}\alpha\lambda\omicron s$, &c.

EPENTHESIS.

§ 75. In the combinations α , $o + \nu j$, ρj , $f j$ the j palatalized the preceding consonant and then disappeared. The palatal element in the consonant then combined with the preceding vowel to form a diphthong, as $\beta\alpha\acute{\iota}\nu\omega$ from * $\beta\alpha\nu j\omega$ older * $\beta\alpha\mu j\omega$, Indg. * $\text{gmj}\acute{\omicron}$, cp. Lat. *venio*, Goth. *qima*, *I come*; $\phi\alpha\acute{\iota}\nu\omega$ from * $\phi\alpha\nu j\omega$; fem. $\tau\acute{\epsilon}\kappa\tau\alpha\iota\upsilon\alpha$ from * $\tau\epsilon\kappa\tau\alpha\nu j\alpha$, and similarly $\mu\acute{\epsilon}\lambda\alpha\iota\upsilon\alpha$, $\tau\acute{\alpha}\lambda\alpha\iota\upsilon\alpha$, $\lambda\acute{\epsilon}\alpha\iota\upsilon\alpha$; Att. $\acute{\alpha}\gamma\kappa\omicron\iota\upsilon\alpha$ from

*ἀγκονῖα. σπαίρω from *σπαρῖω, Indg. *sprjō; θαιρός from *θφαρῖος, Indg. *dhwr̥jos, *hinge of a door*; μοῖρα from *μορῖα, cp. μόρος, δαίω from *δαιφω older *δαῖω, and similarly καίω, κλαίω. See § 129, 3.

§ 76. The combinations ασῖ, οσῖ, εσῖ, υσῖ became αι, οι, ει, υι (through the intermediate stage *ahj*, &c.), and then the second element of the diphthong partly disappeared in Attic and Ionic before a following ο, as Hom. λιλαίομαι from *λιλασῖομαι; ναίω from *νασῖω, cp. aor. νάσ-σαι; Hom. τοῖο, Skr. *tásya*; Hom. ἐμεῖο, from *ἐμεσῖο; opt. εἶην from *εῖσῖην, Skr. *sṣam*; Hom. τελείω, τελέω, Att. τελῶ, from *τελεσῖω; ἀλήθεια from *ἀλᾱθεσῖα, cp. ἀληθής, -ές; pf. part. fem. Hom. ἰδυῖα from *φιδυσῖα = Skr. *vidúṣī*. See § 129, 9.

PROTHESIS.

§ 77. It used to be assumed that prothesis took place in Greek before an initial liquid, nasal or *f* + vowel, but most scholars are now generally agreed that a prothetic vowel was only developed in the initial combination Indg. *r* + vowel, as ἔρεβος, Skr. *rājaḥ*, Goth. *riqis*, *darkness*; ἐρυθρός, Skr. *rudhiráḥ*, Lat. *ruber*, OE. *rēad*, *red*; ὀρέγω beside Lat. *rego*. Even in these examples it is not improbable that the initial vowel represents a phase of ablaut which has not been preserved in these and similar words in the other Indg. languages. Forms like ἀλείφω beside λίπος; ἀλίνω beside Lat. *lino*; ἀμέλγω beside Lat. *mulgeo*; ἀνὴρ beside Skr. *nár-*, *man*; ὄνομα beside Lat. *nōmen*; ἄ(f)ησι beside Skr. *vāti*, *he blows*; Hom. ἐ(φ)έρση beside ἔρση; which were formerly regarded as containing a prothetic vowel, represent a different grade of ablaut.

ANAPTYXIS.

§ 78. By anaptyxis is meant the development of a vowel between a liquid or nasal + a preceding or following consonant. Vowels of this kind are found in the old and

modern periods of most of the Indg. languages. No sure examples occur in classical Greek, but they are not altogether uncommon on inscriptions, &c., as Attic (Vase) *Ἐρεμῆς, Τέροπων* for *Ἐρμῆς, Τέρπων*; *βαράγχος* (Hipponax) for *βράγχος, τόρονος* (quoted by Hesychius for Tarentum) beside *τόρνος, σκόροδον* beside *σκόρδον*. Cp. Lat. *pōcolum, pōculum* beside *pōclum*, French *canif* beside English *knife*, mod. northern dial. *stərək, stək* beside Old English *styric, styrc, calf*; *filēm, marəbl* beside standard English *film, marble*.

VOWEL-CONTRACTION.

§ 79. In treating of vowel-contraction it is necessary to distinguish three periods: (1) contractions which took place already in the Indg. parent language, (2) those which took place in primitive Greek, and were accordingly common to all the Greek dialects, and (3) those which took place in the individual dialects.

To treat in detail the question of vowel-contraction in the first period would be beyond the plan and scope of this grammar, because the resultant long vowels or diphthongs were not merely common to Greek, but to all the Indg. languages. It will therefore be sufficient to give here only a few examples of such contractions:—

$e + e > \tilde{e}$, as *ἦα*, Skr. *ásam*, from **ésəm*, older **e* (augment) + *esəm*, *I was*.

$o + a > \tilde{o}$ in the dat. sing. of o-stems, as *θεῶ* from **dhweso + ai*, cp. the original ending preserved in infinitives like *ἴδμεναι*, Skr. *vidmánē*, *to know*; Att. *δοῦναι*, Cypr. *δοφεναι*, Skr. *dāvánē*, *to give*.

$o + e > \tilde{o}$ in the nom. pl. of o-stems, as Skr. *vṛkāḥ*, Goth. *wulfōs*, from **wļqōs*, older **wļqo + es*, *wolves*, cp. *πατέρες*.

$\bar{a} + e > \tilde{a}$ in the nom. pl. of ā-stems, as Skr. *vṛkāḥ*, *she-wolves*, from **wļqā + es*.

$\bar{a} + a > \tilde{a}$ in the dat. sing. of \bar{a} -stems, as $\theta\epsilon\tilde{a}$, cp. Goth. *gibái*, for *a gift*, Indg. $\bar{a} + ai$.

Most of the contractions were due to the loss of intervocalic *s* (through the intermediate stage *h*) and *j* in primitive Greek. After the loss of these consonants the combinations \tilde{a} , \tilde{e} , $\tilde{o} + \tilde{i}$ or \tilde{u} were contracted in certain cases in the prehistoric period of all the dialects. The loss of intervocalic *f* took place at a much later period and accordingly belongs to the history of the separate dialects (§ 122). But the great majority of vowel-contractions took place after primitive Greek became differentiated into the various separate dialects. Vowels were contracted in Attic more extensively than in any of the other dialects, although even in this dialect there were certain combinations which did not undergo contraction in all cases :—

(1) The combinations ϵo , $\epsilon \omega$, ϵa , where an intervocalic *s* or *j* had disappeared, remained in dissyllables, but underwent contraction in words of more than two syllables, as $\theta\epsilon\acute{o}s$ from $*\theta f\epsilon s o s$, but $\Theta o\acute{u}\phi i l o s$, $\Theta o\acute{u}\phi r a s t o s$; $\xi\acute{e}\omega$ from $*\xi\acute{e} s \omega$, but $\xi o\acute{u}\mu\epsilon n$, $\xi o\acute{u} s i$; $\xi a\rho$ from $*f\acute{e} s a\rho$, but gen. $\eta\rho o s$ from $*f\acute{e} s a\rho o s$; $\delta\acute{e} o s$ from $*\delta f\acute{e} j o s$; $\delta\acute{e} \omega$ from $*\delta\acute{e} j \omega$, *I bind*, but $\delta o\acute{u}\mu\epsilon n$, $\delta o\acute{u} s i$. But when the same combinations arose after the loss of *f* they remained uncontracted in older Attic even in words of more than two syllables, as $\nu\acute{e}(f) o s$, $\nu\epsilon(f) o\chi\mu\acute{o}s$, gen. $\eta\delta\acute{e}(f) o s$, $\pi\lambda\acute{e}(f) o\mu\epsilon n$; $\xi\omega s$, Hom. $\eta\acute{o} s$, Dor. $\tilde{a} s$, from $*\tilde{a} f o s$, *until*; $\beta a s i l\acute{e} \omega s$, Hom. $-\eta\acute{o} s$, Cypr. $-\eta f o s$; $\eta\delta\acute{e}(f) \omega n$; $\kappa\rho\acute{e}(f) a s$, $\acute{\epsilon} n n\acute{e}(f) a$, $\nu\epsilon(f) a\rho\acute{o}s$, $\eta\delta\acute{e}(f) a$. In like manner the combinations $a\eta$, $\epsilon o u$, $o a$ remained uncontracted after the loss of *f*, as $\acute{a}(f) \eta\delta\acute{\omega} n$, $\chi\acute{o}(f) a n o s$, $\chi o(f) \acute{a} n \eta$, gen. $\Pi\epsilon\rho i \kappa\lambda\acute{e} o u s$, from $*-\kappa\lambda\acute{e} f e s o s$.

(2) The combinations ϵa , $\epsilon \omega$ were contracted when preceded by *i*, but remained in other cases, as acc. $\acute{a} l i \hat{a}$, $\acute{a} l i \hat{a} s$, beside $\beta a s i l\acute{e} \tilde{a}$, $-\acute{e} \tilde{a} s$; gen. $\acute{a} l i \acute{\omega} s$, $\acute{a} l i \acute{\omega} n$, beside $\beta a s i l\acute{e} \omega s$, $-\acute{é} \omega n$.

§ 80. Below is given a classification of the contractions arranged according to the nature of the first vowel.

- $\alpha + \alpha > \bar{\alpha}$ in all the dialects, as Hom. Ion. $\acute{\alpha}\tau\eta$ from $*\acute{\alpha}\acute{\alpha}\tau\bar{\alpha}$;
 Hom. $\delta\acute{\epsilon}\pi\bar{\alpha}$ from $*\delta\acute{\epsilon}\pi\alpha\sigma\alpha$; $\tau\acute{\alpha}\lambda\lambda\alpha = \tau\acute{\alpha}\ \acute{\alpha}\lambda\lambda\alpha$.
 $\alpha + \epsilon > \bar{\alpha}$ in Att. Ion., but η in Dor., as $\acute{\alpha}\kappa\omega\nu$ from $\acute{\alpha}\acute{\epsilon}\kappa\omega\nu$;
 $\delta\rho\bar{\omega}$ from $\acute{\alpha}\epsilon\rho\bar{\omega}$; Att. Ion. $\tau\acute{\iota}\mu\bar{\alpha}\tau\epsilon$, Dor. $\tau\acute{\iota}\mu\eta\tau\epsilon$ from
 $\tau\acute{\iota}\mu\acute{\alpha}\epsilon\tau\epsilon$; Dor. $\delta\rho\eta$ from $\delta\rho\alpha\epsilon$.
 $\alpha + \iota > \alpha\iota$, as $\pi\alpha\iota\varsigma$ from $*\pi\acute{\alpha}\acute{\iota}\varsigma$; $\alpha\iota\sigma\theta\acute{\alpha}\nu\omicron\mu\alpha\iota$ from $*\acute{\alpha}\acute{\iota}\phi\iota$ -
 $\sigma\theta\acute{\alpha}\nu\omicron\mu\alpha\iota$; $\gamma\acute{\epsilon}\rho\alpha\iota$ from $\gamma\acute{\epsilon}\rho\alpha\iota$.
 $\alpha + \omicron > \omega$ in Att. Ion., but $\bar{\alpha}$ in Dor. Aeol. and Elean, as
 $\acute{\alpha}\gamma\eta\rho\omega\varsigma$, Hom. $\acute{\alpha}\gamma\eta\rho\alpha\omicron\varsigma$; $\acute{\omicron}\rho\bar{\omega}$ from $\acute{\omicron}\rho\acute{\alpha}\omega$; $\tau\acute{\iota}\mu\bar{\omega}\mu\epsilon\nu$
 from $\tau\acute{\iota}\mu\acute{\alpha}\omicron\mu\epsilon\nu$; Dor. (Theocritus) $\acute{\epsilon}\pi\acute{\alpha}\xi\bar{\alpha}$ from $-\alpha\omicron$;
 Boeot. $\phi\bar{\upsilon}\sigma\acute{\alpha}\nu\tau\epsilon\varsigma$ from $-\acute{\alpha}\omicron\nu\tau\epsilon\varsigma$.
 $\alpha + \upsilon > \alpha\nu$, as $\delta\alpha\nu\lambda\omicron\varsigma$ from $*\delta\alpha\sigma\nu\lambda\omicron\varsigma$, Indg. $*\delta\eta\sigma\nu\lambda\omicron\varsigma$.
 $\alpha + \bar{\alpha} > \bar{\alpha}$ in all the dialects, as $\beta\epsilon\beta\acute{\alpha}\sigma\iota$, $\iota\sigma\tau\acute{\alpha}\sigma\iota$, from
 $-\alpha\bar{\alpha}\sigma\iota$.
 $\alpha + \eta > \bar{\alpha}$ in Att. Ion., but η in Dor. Locr., as subj. $\tau\acute{\iota}\mu\bar{\alpha}\tau\epsilon$,
 Dor. $\tau\acute{\iota}\mu\eta\tau\epsilon$, from $\tau\acute{\iota}\mu\acute{\alpha}\eta\tau\epsilon$; Ion. $\acute{\alpha}\delta\eta\varsigma$ from $\acute{\alpha}\eta\delta\eta\varsigma$.
 $\alpha + \eta > \bar{\alpha}$, as subj. $\tau\acute{\iota}\mu\bar{\alpha}$ from $\tau\acute{\iota}\mu\acute{\alpha}\eta$.
 $\alpha + \omega > \omega$, as $\tau\acute{\iota}\mu\bar{\omega}$ from $\tau\acute{\iota}\mu\acute{\alpha}\omega$.
 $\alpha + \epsilon\iota (= \bar{\epsilon}) > \bar{\alpha}$ in Att., as $\phi\bar{\alpha}\nu\omicron\varsigma$, Ion. $\phi\alpha\epsilon\iota\nu\omicron\varsigma$, from $*\phi\alpha$ -
 $\acute{\epsilon}\sigma\nu\omicron\varsigma$; $\acute{\alpha}\rho\bar{\alpha}\varsigma$ from $\acute{\alpha}\epsilon\acute{\iota}\rho\bar{\alpha}\varsigma$.
 $\alpha + \epsilon\iota (= \text{prim. Gr. } \epsilon\iota) > \bar{\alpha}$ in Att. Ion., but η in Dor., as
 $\acute{\alpha}\delta\omega$ from $*\acute{\alpha}(f)\epsilon\acute{\iota}\delta\omega$; indic. $\tau\acute{\iota}\mu\bar{\alpha}$ from $\tau\acute{\iota}\mu\acute{\alpha}\epsilon\iota$; Dor. $\acute{\omicron}\rho\eta$
 from $\acute{\omicron}\rho\acute{\alpha}\epsilon\iota$.
 $\alpha + \omicron\iota > \varphi$, as $\phi\bar{\omicron}\delta\eta$ from $\acute{\alpha}(f)\omicron\iota\delta\eta$; $\tau\acute{\iota}\mu\bar{\omega}$, $\tau\acute{\iota}\mu\bar{\omega}\mu\epsilon\nu$, from
 $\tau\acute{\iota}\mu\acute{\alpha}\omicron\iota$, $\tau\acute{\iota}\mu\acute{\alpha}\omicron\iota\mu\epsilon\nu$.
 $\alpha + \omicron\upsilon > \omega$, as $\acute{\epsilon}\tau\acute{\iota}\mu\bar{\omega}$, $\tau\acute{\iota}\mu\bar{\omega}\sigma\iota$, from $\acute{\epsilon}\tau\acute{\iota}\mu\acute{\alpha}\omicron\upsilon$, $\tau\acute{\iota}\mu\acute{\alpha}\omicron\upsilon\sigma\iota$.
 $\epsilon + \alpha > \eta$, as gen. $\eta\bar{\rho}\omicron\varsigma$ from $*\acute{\epsilon}\sigma\alpha\rho\omicron\varsigma$; $\gamma\acute{\epsilon}\nu\eta$ from $*\gamma\acute{\epsilon}\nu\epsilon\sigma\alpha$.
 $\epsilon + \epsilon > \epsilon\iota (= \text{long close } \bar{\epsilon})$ in Att. Ion. and mild Dor., but η
 in Aeolic and severe Dor., as $\phi\acute{\iota}\lambda\epsilon\iota$, severe Dor. $\phi\acute{\iota}\lambda\eta$,
 from $\phi\acute{\iota}\lambda\epsilon\epsilon$; $\epsilon\acute{\iota}\chi\omicron\nu$, Lesb. severe Dor. $\eta\acute{\chi}\omicron\nu$, from
 $\acute{\epsilon}\epsilon\chi\omicron\nu$; $\tau\rho\acute{\epsilon}\iota\varsigma$, Lesb. $\tau\rho\eta\varsigma$, from $*\tau\rho\acute{\epsilon}\acute{\epsilon}\varsigma$.
 $\epsilon + \iota > \epsilon\iota$, as $\epsilon\acute{\iota}$ from $*\acute{\epsilon}\sigma\iota = \text{Skr. } \acute{\acute{\alpha}}\sigma\iota$; $\pi\acute{\omicron}\lambda\epsilon\iota$ from $\pi\acute{\omicron}\lambda\epsilon\acute{\iota}$;
 $\gamma\acute{\epsilon}\nu\epsilon\iota$ from $*\gamma\acute{\epsilon}\nu\epsilon\sigma\iota$.
 $\epsilon + \omicron > \omicron\upsilon (= \bar{\omicron}$, later $\bar{\upsilon}$) in Att., ω in Dor., and $\epsilon\upsilon$ in Ion.
 and Boeot., as Att. $\gamma\acute{\epsilon}\nu\omicron\upsilon\varsigma$ from $*\gamma\acute{\epsilon}\nu\epsilon\sigma\omicron\varsigma$; $\delta\omicron\upsilon\mu\epsilon\nu$ from

*δέχομεν; Θούφιλος beside θεός; Dor. ἐμῶς from ἐμέος; εὐχαριστῶμες from -έομες; Ion. Boeot. βέλεως from βέλεος older *βέλεσος.

ε + ᾱ > εη > η in Ion. (§ 51), as βορῆς, νῆ = βορέᾱς, νέᾱ.

ε + α > εη > η in Ion., as dat. γενῆ = Att. γενεᾷ.

ε + η > η in all the dialects, as φιλήτε from φιλέητε; Περικλῆς from -έης.

ε + η > η, as φιλή from φιλέη.

ε + ω > ω in Att., as φιλῶ, ἀλιῶς, beside Ion. φιλέω, ἀλιέως.

ε + αι > η, as indic. mid. φέρη from φέρε(σ)αι = Skr. bhārasē.

ε + ει (= ē, § 58) > ει (= long close ē), as κλεινός from *κλειεινός, older *κλεφεσνος.

ε + ει (= prim. Gr. ει) > ει, as φιλεῖ from φιλέει.

ε + οι > οι in Att., as φιλοῖ, φιλοῖμεν, from φιλέοι, φιλέοιμεν.

ε + ου > ου, as φιλοῦ, φιλοῦσι, from φιλέου, φιλέουσι.

ι + ι > ι, as Δί from Διφί, Att. Δί had its ι from the genitive.

ο + α > ω, as αἰδῶ from αἰδῶα, Indg. *aidosm; ὦτα from ὅτα; Δημῶναξ from Δημό- + αναξ.

ο + ε > ου in Att. Ion. mild Dor., but ω in severe Dor., as μισθοῦτε, severe Dor. -ῶτε, from -έετε; λουτρόν from λοετρόν; Att. ἐλάττους, Ion. ἐλάσσους, Dor. ἐλάσσως, from -οες, Indg. *-oses.

ο + ι > οι, as κοῖλος from *κοφίλος; οἷς from *ὀφίς = Lat. ovīs, Skr. áviḥ.

ο + ο > ου in Att. Ion. and mild Dor., but ω in Aeol. and severe Dor., as νοῦς from νόος; λύκου, Boeot. Lesb. severe Dor. λύκω; μισθοῦντες, severe Dor. -ῶντες, from -δόντες.

ο + η > ω, as δηλῶτε from δηλόητε; Ion. βωθέω = βοηθέω.

ο + η > οι, as subj. δηλοῖς, δηλοῖ, from -όη.

ο + ω > ω in all the dialects, as δηλῶ from δηλόω, δηλῶμεν from δηλῶωμεν.

ο + φ > φ in all the dialects, as ἀπλῶ from ἀπλόφ.

$o + \epsilon i$ (= long close \bar{e}) > ou , as $\delta\eta\lambda\omicron\upsilon\nu$ from $\delta\eta\lambda\acute{o}\epsilon\iota\nu$, $\omicron\iota\nu\omicron\upsilon\varsigma$ from $\omicron\iota\nu\acute{o}\epsilon\iota\varsigma$.

$o + \epsilon i$ (= prim. Gr. ϵi) > oi , as $\delta\eta\lambda\omicron\iota$ from $\delta\eta\lambda\acute{o}\epsilon\iota$; $\omicron\gamma\omega$ beside Lesb. inf. $\acute{o}\phi\epsilon\iota\gamma\eta\nu$.

$o + oi$ > oi , as $\delta\eta\lambda\omicron\iota\varsigma$, $\delta\eta\lambda\omicron\iota\tau\epsilon$, from $\delta\eta\lambda\acute{o}\iota\varsigma$, $\delta\eta\lambda\acute{o}\iota\tau\epsilon$; $\epsilon\upsilon\nu\omicron\iota$ from $\epsilon\upsilon\nu\omicron\omicron\iota$.

$o + ou$ > ou , as $\nu\omicron\upsilon$ from $\nu\acute{o}\upsilon$, $\delta\eta\lambda\omicron\upsilon\varsigma\iota$ from $\delta\eta\lambda\acute{o}\upsilon\varsigma\iota$; $\sigma\omicron\upsilon\mu\alpha\iota$ from $\sigma\omicron\omicron\upsilon\mu\alpha\iota$, older $*\sigma\omicron\phi\acute{o}\mu\alpha\iota$.

$v + v$ > \bar{v} , as Att. (inscription) $\bar{v}\varsigma = \upsilon\varsigma$.

$\bar{a} + \alpha$ > \bar{a} , Att. $\lambda\acute{\alpha}\varsigma$ beside Hom. $\lambda\acute{\alpha}\alpha\varsigma$; Dor. $\gamma\hat{a}$ from $*\gamma\hat{a}\alpha$.

$\bar{a} + \epsilon$ > \bar{a} in Dor. and Aeol., as Dor. $\acute{\alpha}\lambda\iota\omicron\varsigma$, Lesb. $\acute{\alpha}\lambda\iota\omicron\varsigma$ from $\acute{\alpha}\acute{\epsilon}\lambda\iota\omicron\varsigma$; Dor. $\phi\omega\nu\hat{\alpha}\nu\tau\alpha$ from $\phi\omega\nu\acute{\alpha}\epsilon\nu\tau\alpha$.

$\bar{a} + i$ > α , η , as $\rho\acute{\alpha}\tau\epsilon\rho\omicron\varsigma$, $\rho\acute{\eta}\tau\epsilon\rho\omicron\varsigma$ from $\rho\acute{\alpha}\iota\tau\epsilon\rho\omicron\varsigma$, $\rho\acute{\eta}\iota\tau\epsilon\rho\omicron\varsigma$; $\theta\nu\eta\sigma\kappa\omega$ from $*\theta\nu\acute{\alpha}\iota\sigma\kappa\omega$; $\gamma\rho\acute{\alpha}\delta\iota\omicron\nu$ from $\gamma\rho\acute{\alpha}\acute{\iota}\delta\iota\omicron\nu$.

$\bar{a} + o$ > $\eta\omicron$, $\epsilon\omega$ (§ 72) in Att. Ion., but \bar{a} in Dor. and Aeol., as Hom. $\eta\omicron\varsigma$, Att. $\acute{\epsilon}\omega\varsigma$, Dor. Boeot. $\acute{\alpha}\varsigma$, from $\acute{\alpha}\omicron\varsigma$, *until*; gen. $\mathcal{A}\tau\rho\epsilon\iota\delta\epsilon\omega$, Dor. $-\bar{a}$; Dor. Lesb. $\epsilon\upsilon\epsilon\rho\gamma\acute{\epsilon}\tau\bar{a}$ from $-\bar{a}\omicron$. See § 323.

$\bar{a} + \bar{a}$ > \bar{a} in all the dialects, as $\mathcal{A}\theta\eta\nu\hat{\alpha}$ from $-\bar{a}\bar{a}$; gen. Dor. $\gamma\acute{\alpha}\varsigma$ from $-\acute{\alpha}\bar{a}\varsigma$, cp. § 323.

$\bar{a} + \alpha$ > α , as dat. Dor. $\gamma\hat{\alpha}$ from $*\gamma\bar{a}\acute{\alpha}$.

$\bar{a} + \omega$ > \bar{a} in Dor. and Aeol., gen. pl. $\tau\hat{\alpha}\nu$, Att. $\tau\hat{\omega}\nu$, from $\tau\acute{\alpha}\omega\nu$, older $*\tau\acute{\alpha}\sigma\omega\nu = \text{Skr. } t\acute{a}s\bar{a}m$.

$\eta + \epsilon$ > η in all the dialects, as $\beta\alpha\varsigma\iota\lambda\eta\varsigma$ from $-\eta\acute{f}\epsilon\varsigma$; Ion. acc. $\tau\acute{\iota}\mu\eta\nu\tau\alpha$ from $\tau\acute{\iota}\mu\acute{\eta}\epsilon\nu\tau\alpha$.

$\eta + \eta$ > η in all the dialects, as Att. subj. $\zeta\eta\tau\epsilon$, $\phi\alpha\nu\eta\tau\epsilon$, from $*\zeta\acute{\eta}\eta\tau\epsilon$, $*\phi\alpha\nu\acute{\eta}\eta\tau\epsilon$.

$\eta + \eta$ > η in all the dialects, as Att. subj. $\zeta\hat{\eta}$ from $*\zeta\eta\eta$.

$\eta + \epsilon i$ (= long close \bar{e}) > η in Att. Ion. and mild Dor., as Ion. nom. $\tau\acute{\iota}\mu\eta\varsigma$ from $\tau\acute{\iota}\mu\acute{\eta}\epsilon\iota\varsigma$.

$\eta + \epsilon i$ (= prim. Gr. ϵi) > η in all the dialects, as Att. $\zeta\hat{\eta}$ from $*\zeta\acute{\eta}\epsilon\iota$; $\eta\delta\eta$ from $*\eta\acute{f}\epsilon\iota\delta\eta$.

$\omega + \alpha$ > ω in Att. Lesb., but \bar{a} in Dor. and Boeot., as Att. Lesb. $\pi\rho\acute{\omega}\tau\omicron\varsigma$, Dor. Boeot. $\pi\rho\hat{\alpha}\tau\omicron\varsigma$, from $*\pi\rho\acute{\alpha}\acute{\alpha}\tau\omicron\varsigma$; $\eta\rho\omega$ from $\eta\rho\omega\alpha$; $\acute{\omega}\nu\alpha\xi = \acute{\omega}\acute{\alpha}\nu\alpha\xi$.

$\omega + \epsilon > \omega$, as *ἥρως* from *ἥρωες*; Att. *ῥιγῶτε* from *-ώετε*.

$\omega + \iota > \varphi$, as *ἥρῳ* from *ἥρωι*.

$\omega + o > \omega$ in all the dialects, as *σῶς* from *σῶος*; *ῥιγῶντες* from *-ωνοτες*.

$\omega + \eta > \omega$, as subj. *ῥιγῶτε* from *-ώητε*.

$\omega + \eta > \varphi$, as subj. *ῥιγῶ* from *-ώη*.

$\omega + \omega > \omega$ in all the dialects, as *ῥιγῶ* from *ῥιγῶω*; subj. *ἄλωμεν* from *ἄλώωμεν*.

$\omega + \epsilon i$ (= prim. Gr. *ει*) $> \varphi$, as *ῥιγῶ* from *ῥιγῶει*.

$\omega + oi > \varphi$, as *ῥιγῶεν* from **-ώοιεν*.

$\omega + ou > \omega$, as *ῥιγῶσα* from *-ώουσα*.

CHAPTER IV

ABLAUT

§ 81. Up to this point we have treated the Indg. vowels and their equivalents in the more important languages without any reference to the manner in which these vowels stand to each other in any one language. It now remains to illustrate and formulate the manner in which they stand to each other, or in other words to discuss the phenomenon of what is called ablaut or vowel gradation. And for this purpose we shall confine our examples almost entirely to Greek, partly because it is the language which concerns us most intimately in this book and partly because, having preserved the Indg. vowels more faithfully than any other language, it is best fitted to illustrate the various phenomena of ablaut.

§ 82. By ablaut or vowel gradation is meant such quantitative, qualitative and accentual differences in the vocalic elements of groups of etymologically and morphologically related words as were caused by sound-laws which operated in the prim. Indg. language before it

became differentiated into the separate languages. Such are e.g. the differences in the root-syllables of λείπω : λέλοιπα : ἔλιπον, πέτομαι : ποτέομαι : ἐπτόμην, φέρω : φόρος : φῶρ : φαρέτρᾱ : δίφρος, Lat. *pedem* : πόδα : Lat. *pēs* : Dor. πῶς : ἐπί-βδαι. ἄγω : ὄγμος. ῥήγνυμι : ἔρρωγα : ῥαγῆναι. δί-δω-μι : Lat. *datus* : Skr. *da-d-māḥ*, *we gíve*. Dor. φᾱμί : φωνή : φαμέν. Examples in other than root-syllables are λύκε : λύκον : Goth. *wulfōs*, *wolves*, φέρετε : Dor. φέροντι, ποιμένα : δαίμονα : ποιμήν : δαίμων : ποίμνη, πατέρες : εὐ-πάτορες : πατήρ : εὐ-πάτωρ : πατρός, δυσμενές : δυσμενής, πόλις : πόλεις from *πολεjes, δοτήρ : δώτωρ.

§ 83. According as the vowels which stand in ablaut relation to each other differ in quality or in quantity only, or both in quality and quantity, we have what is called qualitative, quantitative or qualitative-quantitative ablaut.

Qualitative ablaut only occurs in syllables which have the strong grade of ablaut and is for the most part confined to the interchange of *e* : *o* and of *ē* : *ō* in the *e*-series of ablaut (§ 96), as φέρω : φόρος, λείπω : λέλοιπα, πατήρ : εὐ-πάτωρ. ἄγω : ὄγμος. ῥήγνυμι : ἔρρωγα. Dor. φᾱμί : φωνή. It is most difficult to account for this phase of ablaut. The interchange between *e* and *o* and between *ē* and *ō* seems to have been so regulated that *ē* originally stood in the chief-accented syllable and *ō* in the next following syllable, as in φρένες, φρήν : ἄφρονες, ἄφρων ; πατέρες, πατήρ : εὐ-πάτορες, εὐ-πάτωρ.

Quantitative and qualitative-quantitative ablaut mostly arose through the loss or weakening of vowels in unaccented syllables, as ἱ-μεν : εἰ-μι = Skr. *i-māḥ* : *ē-mi*, λιπεῖν : λείπω, φυγεῖν : φεύγω, ἔδρακον : δέρκομαι, πτέσθαι : πέτομαι, πατρός : πατέρα, μίμνω : μένω. Lat. *datus* : δί-δω-μι = Indg. *ə* : *ō*. ἴσταμεν : Dor. ἴσταμι = Indg. *ə* : *ā*. The stress accent must have been more predominant than the pitch accent at the time quantitative ablaut came into

existence, because it is only upon this assumption that we are able to account for the weakening and eventual loss of vowels in unaccented syllables. See § 28.

§ 84. Scholars are now generally agreed that the factors which brought about the phenomenon called ablaut were of various kinds. Although the prime factor was doubtless the system of accentuation which prevailed at different periods in the parent Indg. language, there were also several other factors more or less connected with accent, such as vowel-contraction, lengthening of vowels by compensation for the loss of a vowel in the next syllable, rhythmical lengthening (see Wackernagel, *Das Dehnungsgesetz der griech. Composita*), numerous analogical formations, the mixing up of the various ablaut-series through the influence of analogy, &c. And as all these vowel-changes and probably many others connected with ablaut took place long before the separate languages came into existence, it is practically impossible to determine their chronological order or to be certain about the precise nature of some of the vowel-changes. In the following account of ablaut certain more or less problematical details have been omitted as being beyond the scope of this book. The student who wishes to pursue the subject in greater detail should consult Brugmann's *Grundriss*, vol. i, second ed., pp. 482-505, and *Kurze vergleichende Grammatik*, pp. 138-50; Hirt's *Der indogermanische Ablaut* and the excellent epitome in his *Handbuch der griech. Laut- und Formenlehre*, pp. 84-105.

§ 85. From the examples given above (§§ 82-3) it will be seen that ablaut is not confined to what is generally called root-syllables but that it also occurs equally in other syllables. For practical purposes it is convenient to divide words into root-bases and suffix-bases, as in φέρε-τρο-ν : Skr. *bharí-tra-m*, *arm*, πα-τέρ-α : εὐ-πά-τορ-α : πα-τήρ : εὐ-πά-τωρ : πα-τρ-ός, Dor. φέρο-μες : Lat. *feri-mus* (older

-mos), OHG. *bera-mēs*. In the following paragraphs we shall call root-bases simply bases or ablaut-bases, and suffix-bases simply suffixes. Bases or ablaut-bases are mostly monosyllabic or dissyllabic. The monosyllabic bases are called heavy or light according as they contain a long or a short vowel, as **dhē*-, **dō*-, **bhā*- in *τί-θη-μι*, *δί-δω-μι*, Dor. *φᾱ-μί*; **es*-, **ei*- in *ἔσ-τι*, *εἶ-μι*. The dissyllabic bases are called heavy when the first syllable contains a short vowel and the second syllable a long vowel, and light when both syllables contain a short vowel, as **pelē*-, *fill*, **genō*-, *know*, **petā*-, *fly*, see § 458; **leiqe*-, *leave*, in *λείπε-τε* : *λιπεῖν*. The bases underwent numerous vowel-changes owing to the operation of various sound-laws which took place in the prim. Indg. period. The more important of these changes were :—

I. THE WEAKENING OR LOSS OF VOWELS.

§ 86. Vowels were weakened or disappeared in syllables which did not have the chief accent of the word. Such syllables are said to have the weak grade of ablaut. The weak grade is subdivided into weak grade 1 (wg. 1) and weak grade 2 (wg. 2) according as the syllable in which it occurs originally had the secondary accent or was unaccented. In the former case short vowels merely became reduced in quality (generally written *e*, *o*, *a*) and long vowels became reduced in quality and quantity (generally written *ə*, § 49), whereas in the latter case both short and long vowels disappeared through the intermediate stage of reduced vowels. At a later period in the parent Indg. language the reduced short vowels *e*, *o*, *a* regained their full quality again and thus fell together with the original strong grade vowels *e*, *o*, *a*. When the vowel *e* entirely disappeared in diphthongs (*ei*, *eu*, *em*, *en*, *ei*, *er*) the second element of the diphthong became vocalic or re-

maintained consonantal according as it was followed by a consonant or a vowel in the next syllable.

§ 87. Long vowels were reduced to ə (= Aryan i but a in the other languages) or disappeared in the heavy ablaut-series (§ 49), as *θετός* for **θατός* (§ 49, note), Skr. *hitáh*, Indg. **dhētós* : *τί-θη-μι*, *λαγάρος* : *λήγω*, *ράγηναι* : *ρή-γνῦμι* ; *δοτός* for **δατός* (§ 49, note), Lat. *datūs*, Skr. *á-dita* = *ἔ-δοτο* : *δί-δω-μι*, Lat. *dōnum* ; *στατός*, Skr. *sthitáh*, Lat. *status*, Indg. **stētós* : Dor. *ἰστᾶ-μι*, Lat. *stāre*, *φαμέν* : Dor. *φᾶμί*, Skr. *bhāvi-tum*, Indg. **bhēwā-tum*, *to be* : base **bhewā*-. Skr. pl. *da-dh-máh* : sing. *dá-dhā-mi*, *τί-θη-μι*, pl. *da-d-máh* : sing. *dá-dā-mi*, *δί-δω-μι*, *dēvá-ttaḥ*, *given by the gods*, with *-ttaḥ* from older **-d-tos* beside Lat. *datūs*, *φύσις* beside *ἔ-φῦ* from **é-bhwēt* : base **bhewā*-.

§ 88. The first element of the long diphthongs *ēi*, *ōi*, *āi*, *ēu*, *ōu*, *āu* was reduced to ə. The *ei*, *eu* then became contracted to *i*, *ū* before a following consonant already in the prim. Indg. period. But as the second element of long diphthongs often disappeared in the parent language (§ 63) we thus have the ablaut relation *i* : *ē*, *ō*, *ā* and *ū* : *ē*, *ō*, *ā* in the earliest historic period of all the languages, as Skr. *dhitáh*, pp., *sucked*, Lat. *filius* : *θήσατο*, *he sucked*, Lat. *fēlāre*, *σκήπτων* : *σκήπτρον*, *πίθι* : *πῶμα* beside Skr. *pāy-áyati*, *he gives to drink* : inf. *pátum*, *to drink* ; Skr. *múlam*, *root* : *μῶλυ*, Skr. *úddhar*, *udder* : *οὔθαρ* from **ωῡθαρ* (§ 70), *μῦμαρ* : *μῶμαρ*, Skr. *mūráh*, *dull*, *stupid* : *μῶρος*, Lat. *mōrus*. When *i* and *ū* became unaccented they were shortened to *i* and *u*, as *δβριμος* : *βρίθω*, *εὔρίσκω* : *εὔρήσω*, *χάρις* : *χαρῆ-ναι*, *ἀλί-σκομαι* : *ἀλῶ-ναι*, Lat. *di-rūtus* : *ρῦτός*, *πλύσις* : *πλωτός*.

§ 89. In the light ablaut-series the short vowels *e*, *o*, *a* were reduced to voiceless (?) *e*, *o*, *a* or disappeared through the intermediate stage of *e*, *o*, *a*. At a later period in the parent Indg. language the reduced vowels regained their full quality again and thus fell together with the original

strong grade vowels *e*, *o*, *a*, as *πεπτός*, Indg. **peqtós*, gen. sing. Lat. *pedis*, Skr. *padáh*, Indg. **pedés*; *ὀπτέον* from **oq* : *ὄψομαι*; *-ακτός*, Indg. **aktós* : *ἄγω*. In Greek there are no sure examples of the loss of *o*, *a* in the light ablaut-series. It should also be noted that the above *o* is not the same as the *o* which stands in ablaut relation to *e*, as in *φóρος* : *φέρω*. Examples of the loss of *e* are *ἐπτόμην* : *πέτομαι*, *ἐσπέσθαι* : *έπομαι* from **σέπομαι*, Skr. pl. *s-máh* : *ás-mi*, *I am* = Indg. **s-més* : **és-mi*, *ἐπί-βδαι* : Lat. *pedem*, *ἴζω* from **σι-σδ-ω* : *έδος* from **σέδος*, *ἴσχω* from **σί-σχω* : *έχω* from **σέχω*.

When the vowel *e* entirely disappeared in the diphthongs *ei*, *eu*, *em*, *en*, *el*, *er* the second element of the diphthong became vocalic or remained consonantal according as it was followed by a consonant or a vowel in the next syllable, as *ἴμεν* : *εἴμι* = Skr. *imáh* : *émi*, *λιπεῖν*, *έλιπον* : *λείπω*; *κέχυται* : *χέ(φ)ω*, *κλυτός* : *κλέ(φ)ος*, *φυγεῖν*, *έφυγον* : *φεύγω*; *ἄπαξ* : *εἷς* from **σεμς*; *ἄσμενος* from **ḡσμενος* : *νέομαι*, *ἐπαθον* : *πέ-πονθα*, *μαίνομαι* from **μηζομαι* : *μέ-μονα*, *μέ-μαμεν* : *μέ-μονα*, *φρασί* : *φρενός*; *ἐκλάπην* : *κλέπτω*; *έδρακον* : *δέρκομαι*, *δεδαρμένος* : *δέρω*, *πατράσι*, Skr. *pitṛṣu* : *πατέρα*. Skr. *y-ánti*, *they go* : *i-máh*, *we go* = Indg. **j-énti* : **i-més*; Hom. *πείρατα* from **περφ-ατα* : *πρυ-μνός*; *γί-γνομαι* : *έ-γένετο*, *μί-μνω* : *μένω*, *νεο-γνός* : *γένος*; *δί-φρος* : *φέρω*, *πατρός* : *πατέρα*.

§ 90. The combinations *emə*, *enə*, *elə*, *erə* had in heavy bases (§ 97) a threefold development in prim. Greek. They became (1) *άμα*, *άνα*, *άλα*, *άρα* when the first element had the secondary accent, (2) *μα̃*, *να̃*, *λα̃*, *ρα̃* (see § 68) when the last element had the secondary accent and the first element disappeared, and (3) *μα*, *να*, *λα*, *ρα* when neither the first nor the last element had the secondary accent; and (e)jə, (e)wə became *ī*, *ū*, as *έτάλασσα* (Hesych.) : *τλητός*, Lat. *lātus*; *θάνατος* : *θνητός*, Dor. *θνᾱτός*; *κάρηνον* from **καρασνον* : *κρᾱτός* from **κρᾱσατος*; *κάματος* : *κμητός*,

Dor. *κῆᾱτός*, *νέο-δῆᾱτος* : *δέμας* ; *γνητός*, Lat. (g)nātus ; Dor. *λᾱνος*, Lat. *lāna*. *ἔ-τμαγον* : *τέμαχος*, *τέ-τμηκα* ; *τέ-θναμεν* : *θάνατος* ; *τέ-τλαθι* : *τελαμών*, *κα-χλάζω* : *κέ-χλᾱδα* ; *στρατός* : *ἐ-στόρεσα*. *ἰτέᾱ* : base **wejē*- ; *ἔ-φῦ* : Skr. *inf. bhāvītum*, to be, base **bhewā*-.

2. THE LENGTHENING OF VOWELS.

§ 91. Several kinds of vowel lengthening took place in the prim. Indg. period, as lengthening by compensation for the loss of a syllable, contraction of vowels and rhythmical lengthening. See Streitberg, *Indogermanische Forschungen*, iii, pp. 305-416.

§ 92. With quantitative ablaut is connected the prim. Indg. lengthening of vowels by compensation for the loss of a syllable. The vowels thus lengthened have what is called the lengthened grade of ablaut (lg.). The vowels in nearly all the examples which have this lengthening belong to the e-series of ablaut. And the lengthened vowels ē, ō are respectively called lg. 1 and lg. 2.

(a) A short accented vowel in an originally open syllable became lengthened if the following syllable entirely disappeared. This occurs especially in the nom. singular of nouns, as Lat. *pēs*, Dor. *πός* from prim. Indg. **péts*, **pôts*, **pédes* or *-os*, **pódes* or *-os*, beside acc. *pedem*, *πόδα*, Indg. **pédm̥*, **pód̥m̥* ; *πατήρ* from prim. Indg. **pətère* beside *πατέρα*, Indg. **pətér̥m̥* ; and similarly *θήρ* : Lat. *ferus*, *κῆρ* : base **kéred-*, cp. *καρδίᾱ*, *ποιμήν* : *ποιμένα*, *φρήν* : *φρένα*, *βλώψ* : *βλέπω*, *δαίμων* : *δαίμονα*, Hom. *ιδρώς* : *ιδρόα*, *κλώψς* : *κλοπός*, *φώρ* : *φόρος*, *ῥψ* : *ῥφομαι*.

NOTE.—Also when a short vowel disappeared after a long vowel, as in gen. *θεᾶς* from an original form **dhwesāso* : nom. *θεά*.

(b) The e was also lengthened in prim. Indg. in the active singular of the s-aorist, as **léksm̥* from older

*legesm̥, cp. Lat. lēxī : pres. legit; Lat. vēxī, Skr. á-vākṣam : pres. vehit, váhati. The s-aorist in Greek was a new formation with the vowel from the present, as ἐ-λεξα, ἐ-λειψα, but Skr. á-rāikṣam, see § 507.

§ 93. Contraction of the augment with a following vowel, as in ḡa (§ 79), Skr. ásam, Indg. *és̥m from older *é-es̥m; ḡa for *ḡa, Skr. áyam, Indg. *éj̥m from older *é-ej̥m; ḡyon, Dor. ḡyon, Skr. ájam : pres. áγω, ájāmi.

The contraction of case-endings with the stem, as -ās from -ā-es in the nom. plural of ā-stems; -ōi from -o-ai in the dat. singular of o-stems; -ōs from -o-es in the nom. plural of o-stems, see § 79.

§ 94. Rhythmical lengthening in the first elements of compounds and before suffixes so as to avoid a long succession of short vowels, as πρω-πέρυσι, ιερωσύνη : ιερός, Hom. ἐτέρωθι, ἐτέρωσε, ἐτέρωθεν : ἔτερος.

ABLAUT-SERIES.

§ 95. The vowels vary within certain series of related vowels called ablaut-series. The parent Indg. language had six such series, three light and three heavy, viz.

| | sg. 1. | sg. 2. | lg. 1. | lg. 2. | wg. 1. | wg. 2. |
|---------------|--------|--------|--------|--------|--------|--------|
| I. e-series | é | o | é | ō | e | — |
| II. o-series | ó | o | ó | ō | o | — |
| III. a-series | á | o | á | ō | a | — |
| IV. ē-series | é | ō | | | ə | — |
| V. ō-series | ó | ō | | | ə | — |
| VI. ā-series | á | ō | | | ə | — |

Strong grade 1 is taken as the normal grade in all the series. The three light series have three grades, strong grade, lengthened grade, and weak grade, whereas the three heavy series have only the two grades, strong and weak. The origin of the difference between the strong and the weak grade and between the strong and the

lengthened grade have already been explained in the preceding paragraphs. And some indication of the probable origin of the difference between strong grade 1 and strong grade 2 has been given in § 88, but much still remains obscure about the origin of these qualitative differences.

The first ablaut-series is by far the most important. It is found in many monosyllables and always in the first syllable of dissyllabic heavy bases and in the second syllable of dissyllabic light bases and nearly always in the first syllable of dissyllabic light bases. And one or other grade of this series occurs in nearly all suffixes. The second and third series are exceedingly rare. Apart from a few monosyllabic heavy bases the fourth, fifth, and sixth series only occur in the second syllable of dissyllabic heavy bases, and even here the number of examples is not very great. The *ē* in the fourth series often came to be regarded as a formative element in prim. Greek and was then extended by analogy to bases to which it did not originally belong, see §§ 458, 506.

§ 96. Many examples of the various grades of ablaut have been given in the preceding paragraphs. In this and the following paragraph are given examples of the various ablaut-series, and of their application to dissyllabic light and heavy bases.

I. The *e*-series.

| sg. 1. | sg. 2. | lg. 1. | lg. 2. | wg. 2. |
|---------------|---------------|---------------|----------|----------|
| έ | ο | έ | ο | — |
| πέδα | πόδα | Lat. pēs | πώς | ἐπί-βδαι |
| πέτομαι | ποτέομαι | | πωτάομαι | ἐπτόμην |
| ἔπομαι | | | | ἐσπέσθαι |
| έχω | | | | ἴσχω |
| λόγε | λόγος | | | |
| Dor. φέρο-μεν | Lat. feri-mus | OHG. bera-mēs | | |

| sg. 1. | sg. 2. | lg. 1. | lg. 2. | wg. 2. |
|-------------------|-------------------|----------------|-----------|--------------------------|
| φέρε-τε | Dor. φέρο- ντι | | | |
| λείπω | λέλοιπα | Skr. á-rāikṣam | | λιπεῖν |
| πείθω | πέποιθα | | | πιθέσθαι |
| εἶδομαι | οἶδα | | | ἴδμεν |
| εἶμι | | | | ἴμεν |
| ῥέ(F)ω | ῥο(F)ᾶ | | | ῥυτός |
| ἐλεύ(θ)σομαι | εἰλήλουθα | | | ἤλυθον |
| πεύθομαι | | | | πύστις |
| φεύγω | | | | ἔφυγον |
| νέμω | νόμος | | | |
| εἶς from *sems | ὁμοῦ | | | ἄμα, ἄ-παξ |
| μένος | μέμονα | | | μέ-μα-μεν |
| πένθος | πέπονθα | | | ἔπαθον |
| ἐ-γένετο | γέγονα | | | γί-γνο-μαι, γέ-γα-μεν |
| μένω | | | | μίμνω |
| ποι-μένα | δαί-μονα | ποι-μήν | δαί-μων | ποί-μνη |
| φρένα | εὔ-φρονα | φρήν | εὔ-φρων | φρασί |
| κλέπτω | κέκλοφα | | | ἐκλάπην |
| τρέπω | τροπή | | τρωπάω | τραπεῖν |
| δέρκομαι | δέδορκα | | | ἔδρακον |
| φέρω | φορέω | | φώρ | δί-φρος |
| πα-τέρ-ες | εὐ-πά-τορ-ες | πα-τήρ | εὐ-πά-τωρ | πα-τρ-ός |

II. The o-series.

| sg. 1. | sg. 2. | lg. 1. | lg. 2. | wg. 1. | wg. 2. |
|---------|--------|--------------------|--------|--------|-----------|
| ὅ | ο | ὅ | ὀ | ο | — |
| ὄψομαι | | ὥψ | | ὀπτέον | |
| βό(F)ες | | βοῦς from *βωνς | | | ἐκατόμ-βη |

III. The a-series.

| sg. 1. | sg. 2. | lg. 1. | lg. 2. | wg. 1. | wg. 2. |
|--------|--------|---------------|--------|--------|--------|
| á | o | ǎ | ō | a | |
| ἄγω | ὄγμος | Lat. amb-āges | ἀγωγή | -ακτός | |

IV. The ē-series.

| sg. 1. | sg. 2. | wg. 1. | wg. 2. |
|----------------|-----------|------------------|-----------|
| é | ō | ə | — |
| τίθημι | θωμός | θετός for *θατός | |
| Skr. dá-dhā-mi | | hitáḥ | da-dh-máh |
| ρήγνυμι | ἔρ-ρωγα | ράγῃναι | |
| λήγω | | λαγαρός | |
| ῥημα | ἀφ-έ-ω-κα | έτός for *átós | |

V. The ō-series.

| sg. 1. | sg. 2. | wg. 1. | wg. 2. |
|-------------------|--------|-------------------|---------------|
| ō | ō | ə | — |
| δίδωμι | | δοτός for *δατός | Skr. da-d-máh |
| Lat. dōnum, δῶρον | | Lat. datus, δάνος | |

VI. The ā-series.

| sg. 1. | sg. 2. | wg. 1. | wg. 2. |
|--------------|--------|-----------------|--------|
| ǎ | ō | ə | — |
| Dor. φᾱμί | φωνή | φαμέν | |
| Dor. ἴσταμι | | ἴσταμεν, στατός | |
| Dor. ἔ-πταξα | πτωχός | -πτακών | |
| Dor. τάκω | | τακερός | |

DISSYLLABIC BASES.

§ 97. In the parent Indg. language either the first or the second syllable of dissyllabic bases always contained the weak grade of ablaut. Both syllables could have the weak, but not the strong grade. From this it follows that forms

of the type *φέρει*, *φέρει-τε*, Dor. *φέρο-μες*, and *γί-γνομ-μαι* cannot be original. The prim. Indg. forms corresponding to the former were **bhér*, **bhr̥-t(h)é*, **bhr̥-més* = prim. Gr. **φέρ*, **φρατέ*, **φραμές*, and to the latter **gí-gnə-mai* = prim. Gr. **γί-γνα-μαι*. *φέρει*, *φέρει-τε*, *φέρο-μες*, *γί-γνομ-μαι* and similar forms contained the thematic vowels, *e*, *o*. See §§ 450, 456. And in like manner forms of the type *γένος* (stem *γένε-*, Skr. *jánas-*, Lat. *gener-*), *φόρος*, &c. were new formations which came into existence long after the factors which caused the phenomenon of ablaut had ceased to operate. Such new formations took place partly in the parent Indg. language itself and partly in the pre-historic period of the separate languages.

In the following examples of dissyllabic bases the grade of ablaut before the + refers to the first syllable of the base and the one after the + to the second syllable.

(a) Dissyllabic light bases:—sg. 1 + wg. 2 Lith. *lėk-mi*, *I leave*, sg. 2 + wg. 2 *λέ-λοιπ-α*, lg. 1 + wg. 2 Skr. *á-rāikṣ-am* (§ 507), wg. 2 + sg. 1 *ἔ-λιπε-ς*, wg. 2 + sg. 2 *ἔ-λιπο-ν*: **léiq(e)-*, **liq-é-*. sg. 1 + wg. 2 *φέρ-τρον*, *φέρ-τε*, Lat. *fer-tis*, lg. 2 + wg. 2 *φώρ* (§ 92 (a)), wg. 2 + sg. 2 *δί-φρο-ς*: base **bhere-*. sg. 1 + wg. 2 Lat. *genu*, sg. 2 + wg. 2 *γόνυ*, wg. 2 + sg. 1 Goth. *kniu*, lg. 2 + wg. 2 *γων-ία*, wg. 2 + wg. 2 Skr. *abhi-jñú*, *down to the knee*, *γνύξ*: base **geneu-*. sg. 1 + wg. 2 *δέκα-τος*, wg. 2 + sg. 2 *-κοντα* = Indg. **dkomtə*, wg. 2 + wg. 2 *ῥί-κατι* = Indg. **dkm̥ti*: base **dekemt-*. sg. 1 + wg. 2 *αὔξω*, Lat. *augēre*, wg. 2 + sg. 1 Lat. *vegeo*, wg. 2 + lg. 2 OE. *wōcor*, *progeny, usury*, wg. 2 + sg. 2 Goth. *wahsjan*, *to grow*, wg. 2 + wg. 2 Skr. *ugráh*, *mighty*: base **aweq-*, *increase*. wg. 2 + sg. 1 *ἔαρ* from **wesr̥*, wg. 2 + lg. 1 Lat. *vēr* from **wēsr-*, lg. 1 + wg. 2 *ἥως* from **āusōs*, wg. 2 + wg. 2 Skr. *uśás-*, *dawn*: base **awes-*, *shine, flash up*.

(b) Dissyllabic heavy bases. The long vowel (*ē*, *ō*, *ā*) in the second syllable of these bases was weakened to *ə*

when the accent was on the first syllable (§ 458). When the accent was on the second syllable the long vowel was preserved and the short vowel of the first syllable disappeared, as *témə-, *génə-, *pétə- beside *tmē-, *gnō-, *ptā-. It is therefore impossible to determine to which of the long vowels the ə goes back unless forms have been preserved in which the second syllable of the base originally had the accent. The same difficulty also exists with the prim. Indg. combinations emə, enə, elə, erə, which became in prim. Greek μᾶ, νᾶ, λᾶ, ρᾶ when the last element of the combination had the secondary accent (§ 90). They thus fell together with the base forms of the type *ptā- with long ā. Examples are—sg. 1 + wg. 1 τέμα-χος, wg. 2 + sg. 1 τέ-τμη-κα : base *temē-, *cut*. sg. 1 + wg. 1 Skr. véman- from *vayiman-, *loom*, sg. 2 + wg. 2 (f)οἶσος, wg. 2 + sg. 1 Lat. viēre, wg. 2 + wg. 1 ἰτέᾱ, Lat. vītis, wg. 2 + wg. 2 ἵτvs : base *wejē-, *plait, wind*. sg. 1 + wg. 1 Skr. jāni-tōh, *to beget*, γένε-σις for *γένα-σις, wg. 2 + sg. 1 γνωτός, ἔ-γων, Lat. (g)nōtus, OE. cnāwan (*gnē-), *to know*, wg. 2 + wg. 1 Skr. jā-jñih, *germinating* : base *genō-, *genē-, *gignere*. sg. 1 + wg. 1 πέτα-μαι, sg. 2 + wg. 1 ποτά-ομαι, lg. 2 + wg. 1 πωτά-ομαι, wg. 2 + sg. 1 πτῆ-ναι : base *petā-, *spread out, fly*. sg. 1 + wg. 1 Skr. bhāvi-tum from *bhēwi-tum, *to be*, wg. 2 + sg. 1 Lat. -bam from *-bhwām, wg. 2 + wg. 1 ἔ-φῦ from *é-bhwet, wg. 2 + wg. 2 φύ-σις : base *bhwā-, *be*. sg. 1 + wg. 1 κέρα-σαι, wg. 2 + sg. 1 κέ-κρᾱ-μαι : base *kerā-, *mix*. sg. 1 + wg. 1 τελα-μών, wg. 1 + wg. 1 ἐ-τάλα-σσα (Hesych.), wg. 2 + sg. 1 τλητός, Dor. τλᾶτος, Lat. lātus : base *telā-, *bear, endure*.

CHAPTER V

THE PRIMITIVE INDO-GERMANIC
CONSONANTS

§ 98. The Indo-Germanic parent language had the following system of consonants:—

| | LABIAL. | DENTAL. | PALATAL. | VELAR. | |
|---------------------|------------------|---------|----------|--------|----------------------|
| <i>Explosives</i> { | tenues | p | t | k | q, q ^w |
| | mediae | b | d | g | g, g ^w |
| | tenues aspiratae | ph | th | kh | qh, q ^w h |
| | mediae aspiratae | bh | dh | gh | gh, g ^w h |
| <i>Spirants</i> { | voiceless | | s | | |
| | voiced | | z | ? j | |
| <i>Nasals</i> | m | n | ñ | | ŋ |
| <i>Liquids</i> | | l, r | | | |
| <i>Semivowels</i> | w (u) | | j (i) | | |

NOTE.—1. Explosives are consonants which are formed with complete closure of the mouth passage, and may be pronounced with or without voice, i. e. with or without the vocal cords being set in action; in the former case they are said to be voiced (e. g. the mediae), and in the latter voiceless (e. g. the tenues). The aspirates are pronounced like the simple tenues and mediae followed by an *h*, like the Anglo-Irish pronunciation of *t* in *tell*.

The palatal explosives are formed by the front or middle of the tongue and the roof of the mouth (hard palate), like *g*, *k* (*c*) in English *get*, *good*, *kid*, *could*; whereas the velars are formed by the root of the tongue and the soft palate (velum). The latter do not occur in English, but are common in Hebrew, and are often heard in the Swiss pronunciation of German. In the parent Indo-Germanic language there were two kinds of velars, viz. pure velars and velars with lip rounding. The latter are here indicated by *w*. The palatal and velar nasals

only occurred before their corresponding explosives, *ñk*, *ñg*; *ŋq*, *ŋg*, &c.

2. Spirants are consonants formed by the mouth passage being narrowed at one spot in such a manner that the outgoing breath gives rise to a frictional sound at the narrowed part.

z only occurred before voiced explosives, e. g. **nizdos* = Lat. *nīdus*, English *nest*; **ozdos* = Gr. *ὄζος*, Goth. *asts*, *bough*.

3. The nasals and liquids had the functions both of vowels and consonants (§ 64).

4. The essential difference between the so-called semivowels and full vowels is that the latter always bear the accent of the syllable in which they occur, e. g. in English *ców*, *stáin* the first element of the diphthong is a vowel, the second a consonant; but in words like French *rwá* (written *roi*), *bjér* (written *bière*), the first element of the diphthong is a consonant, the second a vowel. In consequence of this twofold function, a diphthong may be defined as the combination of a sonantal with a consonantal vowel. And it is called a falling or rising diphthong according as the stress is upon the first or second element.

5. From the above system of consonants have been excluded certain rare sounds which only existed in the parent language in combination with other sounds, viz. *sh* and *zh*, *p* and *ḏ*, *ph* and *ḏh*.

sh and *zh* only occurred in combination with *tenués* and *mediae* and arose from the older combinations, *tenués aspiratae* and *mediae aspiratae* + *s*, as *tsh*, *psh*, *dzh*, *bzh* from older *ths*, *phs*, *dhs*, *bhs*.

p and *ḏ* only occurred after palatals and velars which were originally unaspirated, as *kḑ*, *qḑ*, *gḑ*, *gḑ*.

ph and *ḏh* only occurred after palatals and velars which were originally aspirated, as *kḑh*, *qḑh*, *gḑh*, *gḑh* from older *khḑ*, *qhḑ*, *ghḑ*, *ghḑ*. In the present state of our knowledge it is impossible to determine how these four spirants were pronounced in the parent language. In Greek they became *t*-sounds, and in Sanskrit, Latin, Germanic and the Baltic-Slavonic languages they became *s*-sounds. See §§ 225-6.

6. The *tenues aspiratae* and the *mediae aspiratae* only occurred before vowels, semivowels, liquids and nasals. When they came to stand before explosives or spirants, they became deaspirated, as *pth*, *bdh*, *tsh*, *dzh* from older *p^{ht}*, *b^{ht}*, *th^s*, *dhs*, see § 109.

7. It is doubtful whether the parent language had a spirant *j*, see § 227.

§ 99. The following tables contain the normal equivalents of the Indg. explosives in Greek, Latin, Old Irish, prim. Germanic, Gothic, Sanskrit and the Baltic-Slavonic languages. For examples see the paragraphs dealing with labial, dental, palatal and velar explosives.

§ 100.

I. THE TENUES.

| Indg. | Gr. | Lat. | O.Ir. | P. Germanic. | Goth. | Skr. | Lith. | O.Slav. |
|----------------|---------|-------|-------|--------------|----------|------|-------|---------|
| p | π | p | — | f, b, b | f, b, b | p | p | p |
| t | τ | t | t, th | þ, ð, d | þ, ð, d | t | t | t |
| k | κ | c | c | x, ǵ | h, ǵ, g | ś | .sz | s |
| q | κ | c | c | x, ǵ | h, ǵ, g | k, c | k | k, č |
| q ^w | π, τ, κ | qu, c | c | χw, ǵw | hw, ǵ, w | k, c | k | k, č |

NOTE.—1. On the development of the Indg. pure and labialized velars in Greek, Sanskrit, Lithuanian and Old Slavonic see §§ 195-210.

2. In Lat. *p* and *c* disappeared medially before *s* + consonant and initially before *s*; *pn*, *tn*, *tsn* > *nn*; *tt*, *ts* > *ss*; *tsl* > *ll*; *tl* > *l* initially and *cl* medially; *cn* > *gn*; and *ncn* > *n* with lengthening of a preceding vowel; *qu* > *c* before *u* and consonants.

3. In O.Ir. *p* disappeared initially and medially between vowels; *sp* > *s*, *f* initially and *sc* medially; *pt*, *ps*, *rp* > *cht*, *ss*,

rr; tt, ts, st > ss; t and c disappeared before nasals and liquids; cs, ct, rct, nc > ss, cht, rt, gg.

4. The Indg. tenues p, t, k, q, q^w became in prim. Germanic the voiceless spirants f, þ, x, x^w = Goth. f, þ, h, hv. These voiceless spirants as also Indg. s became by Verner's Law the voiced spirants ð, ð̊, ȝ, ȝ^w, z (see § 103, note 2) medially and finally when the vowel next preceding them did not, according to the original Indg. system of accentuation, bear the principal accent of the word. The Indg. tenues remained unshifted in the combination s + tenuis, and t also remained unshifted in the Indg. combinations pt, kt, qt. In some words the Indg. velars, when preceded or followed by a w or another labial in the same word, appear in the Germanic languages as labials by assimilation, as Goth. fimf, *five*, wulfs, *wolf* = Indg. *peŋq^we, *wŋq^wos.

§ 101.

2. THE MEDIAE.

| Indg. | Gr. | Lat. | O.Ir. | P. Germanic. | Goth. | Skr. | Lith. | O.Slav. |
|----------------|---------|----------|-------|--------------|-------|------|-------|---------|
| b | β | b | b | p | p | b | b | b |
| d | δ | d | d | t | t | d | d | d |
| g | γ | g | g | k | k | j | ž | z |
| g | γ | g | g | k | k | g, j | g | g, ž |
| g ^w | β, δ, γ | v, gu, g | b, g | kw | q | g, j | g | g, ž |

NOTE.—1. On the development of the Indg. pure and labialized velars in Gr. Lat. Skr. Lith. and O.Slav. see §§ 195-210.

2. In Lat. bn, dn, dm, dl > mn, nn, mm, ll (but l initially), ld > ll; initial dj, dw, gn > j, b, n.

3. In O.Ir. d, g disappeared before l, n, r; bn > mn; mb, dm > mm; db, gb > bb; dg > gg; gd > dd.

4. The Indg. mediae b, d, g, q, q^w became in prim. Germanic the tenues p, t, k, kw.

§ 102. 3. THE TENUES ASPIRATAE.

The tenues aspiratae were rare sounds in the Indg. parent language. Sanskrit and Greek were the only languages which preserved them in historic times. In prim. Keltic, Germanic and the Baltic-Slavonic languages they fell together with the original tenues.

| Indg. | Gr. | Lat. | O.Ir. | P. Germanic. | Goth. | Skr. | Lith. | O.Slav. |
|------------------|---------|-----------|-------|--------------|----------|--------|-------|---------|
| ph | φ | f, b | — | f, b, b | f, b, b | ph | p | p |
| th | θ | f, b, d | t, th | þ, ð, d | þ, ð, d | th | t | t |
| kh | χ | h, f, g | c | χ, ǵ | h, ǵ, g | ? ch | sz | s |
| qh | χ | h, (f), g | c | χ, ǵ | h, ǵ, g | kh, ch | k | k, č |
| q ^w h | φ, θ, χ | f, v, gu | c | χw, ǵw | hw, ǵ, w | kh, ch | k | k, č |

Examples of the tenues aspiratae in Greek and Sanskrit are :—

ph: σφαραγέομαι, *I crack, crackle*, Skr. sphúrjati, *he cracks*; σφήν, Skr. sphyáh, *wedge*; σφέλας, Skr. phála-kam, *footstool*.

th: οἶσθα, Skr. vêttha, *thou knowest*; πλάθανον, *a platter or mould to bake in*, Skr. prthúh, *broad*; μόθος, *battle-din*, Skr. mánthati, *he shakes, twists*. Indg. sth became στ, as ἵστημι, Skr. tísthāmi, *I stand*; στῦλος, *pillar*, Skr. sthūráh, *strong*; superlative suffix -ιστος = Skr. -iśthaḥ.

kh: σκίζω, Lat. scindo, *I split*, Skr. chinátti from *skhinátti, *he splits*, OE. scādan, *to divide*; σχάω, *I slit*, Skr. chyáti, *he slits*.

qh: καχάζω, *I laugh*, Skr. kakhati, *he laughs*; κόγχος, Lat. congius, Skr. śaṅkháh, *muscle*.

q^wh: φάλλη, OE. hwæl, *whale*; σφάλλομαι, *I stumble*,
Skr. skhalatē, *he stumbles*.

§ 103.

4. THE MEDIAE ASPIRATAE.

| Indg. | Gr. | Lat. | O.Ir. | P. Ger- manic. | Goth. | Skr. | Lith. | O.Slav. |
|------------------|---------|-----------|-------|-------------------|-------|-------|-------|---------|
| bh | φ | f, b | b | ᵔ, b | ᵔ, b | bh | b | b |
| dh | θ | f, b, d | d | ᵔ, d | ᵔ, d | dh | d | d |
| gh | χ | h, f, g | g | ḡ, g | ḡ, g | h | ž | z |
| gh | χ | h, (f), g | g | ḡ, g | ḡ, g | gh, h | g | g, ž |
| g ^w h | φ, θ, χ | f, v, gu | g | ḡw, ḡ, w | ḡ, w | gh, h | g | g, ž |

NOTE.—1. In prim. Greek and Italic (Lat. Oscan, Umbrian, &c.) the mediae aspiratae became voiceless and thus fell together with the original tenues aspiratae.

2. The mediae aspiratae became in prim. Germanic the voiced spirants, ᵔ, ᵔ, ḡ, ḡw, and thus fell together with the voiced spirants which arose from the Indg. tenues by Verner's Law (§ 100, note 4). These sounds underwent the following changes during the prim. Germanic period:—ᵔ, ᵔ initially, and ᵔ, ᵔ, ḡ medially after their corresponding nasals, became the voiced explosives, b, d, g. ᵔ, ᵔ, ḡ remained in other positions, and their further development belongs to the history of the separate Germanic languages. In Goth. ᵔ, ᵔ (written b, d) remained medially after vowels, but became explosives (b, d) after consonants. They became f, þ finally after vowels and before final -s. ḡ remained medially between vowels, and medially after vowels before voiced consonants, but became χ (written g) finally after vowels and before final -s. It became g initially, and also medially after consonants.

1. Prim. Germanic ḡw became ḡ before u, in other cases it became w.

§ 104. From what has been said in §§ 100-3 it will be seen that several of the Indg. explosives fell together in the various languages. In Keltic, Germanic and the Baltic-Slavonic languages the *tenuēs aspiratae* fell together with the original *tenuēs*. Sanskrit is the only language which preserved the original *mediae aspiratae*. In Greek and Latin they fell together with the original *tenuēs aspiratae*. In Keltic and the Baltic-Slavonic languages they fell together with the original *mediae*. In Greek, Latin, Keltic and the Germanic languages the pure velars fell together with the original palatals, but were kept apart in Sanskrit and the Baltic-Slavonic languages. In Sanskrit and the Baltic-Slavonic languages the labialized velars fell together with the pure velars, but were kept apart in Greek, Latin, Germanic and partly also in the Keltic languages.

INDG. SOUND-CHANGES.

§ 105. The consonants underwent various sound-changes during the prim. Indg. period, i. e. before the parent language became differentiated into the separate Indo-Germanic languages. The most important of these sound-changes are given in the following paragraphs.

§ 106. *Mediae* became *tenuēs* before voiceless consonants, as *ζευκτός*, Skr. *yuktáh*, Lat. *jūctus*, Lith. *jūktas*, Indg. **juqtós*, *yoked*, beside *ζυγόν*, Skr. *yugám*, Lat. *jugum*, Indg. **jugóm*, *yoke*; *οἶσθα*, Skr. *véttha*, *thou knowest*, beside *οἶδα*, *véda*, *I know*; loc. pl. *ποσσί*, *pośí*, Skr. *patsú*, beside nom. pl. *πόδες*, *pádaḥ*; Lat. *nūptum*, *nūpsi* : *nūbere*; *rectum*, *rēxī* : *regere*; Goth. *giban*, *to give*, beside *fra-gifts*, *a giving*, *espousal*; OE. *bringan*, *to bring*, beside *brōhte*, *I brought*; and similarly in Gr. *αὔξω*, *αὔξάνω* : Lat. *augeo*, Lith. *áugu*, *I increase*, *grow*; *ἀ-νίπτω*, *unwashed*, Skr. *niktáh*, *washed*, *νίψω* : *νίζω* from **niqjō*; *λέξω*, *ἔλεγκτο* : *λέγω*; *τρίψω*, *τέτριπται* : *τρίβω*.

§ 107. Voiceless consonants became voiced before voiced explosives and *z*, as *ἔβδομος* : *ἐπτά* ; *ἐπί-βδαι* (nom. pl.), *the day after the feast*, where *-βδ-* is the weak form of **ped-*, *foot*, cp. Skr. *upa-bdā-*, *stamping, trampling* ; Skr. *nīdāh*, Lat. *nīdus*, OE. *nest*, from **ni-zdos*, *nest*, where *ni-* = *down*, and *-zd-* is the weak form of **sed-*, *sit* ; *βδέω* from **βεδεω* where *βεδ* is the weak form of **pezd-* which occurs in Lat. *pēdo* ; and similarly *κύβδην*, *πλέγδην*, *κλέβδην* : *κύπτω*, *πλέκω*, *κλέπτω* ; *γράβδην*, *βρέγδην* : *γέγραπται*, *βέβρεκται* ; Hom. *ὑββάλλω* : *ὑπο-βάλλω*.

§ 108. When two aspiratae came together the first one became de-aspirated, as imperative *πέπισθι* from **bhebhid-dhi*, older **bhebhidh-dhi* : *πέποιθα*. This combination of consonants was rare in the parent language.

§ 109. When an aspirata came to stand before *s* or before one or more unaspirated explosives, the aspiration became transferred to the last consonant. When the aspirata was voiced the whole group became voiced, as *αἰσχος* from **aighskos*, Goth. *áiwiski* from **aigwisk-*, *shame, disgrace* ; *ἔσχατος* from **eghskatos* : *ἐξ* ; *λέσχη* from **legzghā*, older **legghskā* : *λέχος* ; *πάσχω* from **patskhō*, older **pnthskō*, Indg. **qnthskō* : *παθεῖν* ; *ξένος* from **gzhen-*, older **ghsen-*, Goth. *gasts*, *guest, stranger*, Lat. *hostis* ; *ψώω* from **bzhō-*, older **bhsō-* : Skr. *bá-bhasti*, *he chews, devours*. Cp. § 225.

The sound-law whereby *bht*, *ght* became *bđh*, *gđh* = prim. Greek *πθ*, *κθ* was obliterated by new formations made after the analogy of forms which regularly had *τ*, as in *βλεπτός* : *βλέπω* ; *τέτριπται*, *ἄτριπτος* : *τρίβω* ; *πέπλεκται*, *πλεκτός* : *πλέκω* ; *ἔλεκτο*, *λεκτός* : *λέγω*. And as combinations like *ps̥h*, *bzh*, from older *phs*, *bhs*, regularly became *ps* in prim. Greek (§ 225), the above sound-laws may, so far as historic Greek is concerned, be formulated as follows : *φ*, *χ* appear as *π*, *κ* before a following *τ* or *σ*, as *γέγραπται*, *γράφω* : *γράφω* ; *ἀλείψω* : *ἀλείφω* ; *ροπτός* :

ρόφέω; βέβρεκται, βρέξω : βρέχω; ἀνεκτός : ἀνέχομαι; στείξω : στείχω.

Every Indg. dental + s became ts (§ 110) in prim. Greek, for the further development of which see § 166.

§ 110. When two dental explosives came together a spirantal glide was developed between them, which is generally written ^sz, as t^st, t^sth, d^sd, d^sdh. These combinations became in prim. Greek στ (= Skr. tt, Lat. Germanic ss), σθ, zd, σθ. Every original dental + t appears in Greek as στ. Examples are:—ἄ-ιστος, *unseen, unknown*, Skr. vittāh, *known*, OE. ge-wiss, *sure, certain*, Lat. visus from *vīssus; ἵστε : οἶδα; ὕστερος, Skr. úttarah, *latter*; pp. Skr. sattāh, *sitten*, OE. sess, *seat*, Lat. ob-sessor : *sed-, *sit*; ἀνυστός, ἄ-παστος : ἀνύτω, πατέομαι; κεστός from *κεντ-τός : κεντέω. κέκασται : κεκαδμένος; ἔψευσται : ψεύδω. οἶσθα, Skr. vĕttha, *thou knowest* : οἶδα, véda, *I know*. πέπεισται : πείθω. ἡρείσθην : ἐρείδω. ἐπείσθην : πείθω. μαζός, *breast*, Skr. mēdah, *fat*.

§ 111. Tenues often alternated with mediae especially before or after nasals, as σκαπάνη : Lat. scabo; Skr. daśāt- : δεκάδ-; πάσσαλος from *πάκjaλος : πήγνυμι, Lat. pango, ποικίλος : Lat. pingo, δίκη, Lat. dīco : δέδειγμαι, εἴκοσι : Lat. vīginti.

The alternation between mediae aspiratae and mediae was also not uncommon, as ἀστεμφής : στέμβω, ἀφρός : ὄμβρος; πλίνθος : English flint, πυθμήν : πύνδαξ; Skr. ahám : ἐγώ, Lat. ego, Goth. ik; Skr. hānuh, *jawbone* : γένυς, Goth. kinnus, *cheek*; Skr. mahān : μέγας, Goth. mikils; and similarly between tenues and tenues aspiratae, as πλατύς : Skr. prthūh, *broad*, πλάθανον, *board*; πάτος : Skr. pánthāh, *path*. The reasons for these alternations are unknown. For further examples see Brugmann, *Grundriss*, &c., vol. i, second ed., pp. 629-35.

§ 112. s + consonant often alternated with the simple

consonant, as *στέγος* : *τέγος*, Lat. *tego*; *στένω*, *I groan* : Lat. *tonāre*; *σκαίρω* : *κόρδαξ*; *σμίλη* : Goth. *máitan*, *to cut, hew*.

CHAPTER VI

THE GREEK DEVELOPMENT OF THE INDG. CONSONANT-SYSTEM

§ 113. Before entering upon the history of the individual consonants, it will be well to treat here several points concerning the Greek consonants in general.

§ 114. The Indg. mediae aspiratae became tenues aspiratae in prim. Greek as also in prim. Italic, and thus fell together with and underwent all further changes in common with the Indg. tenues aspiratae (§ 103, note 1). For examples see §§ 162, 177, 193, 201, 209.

§ 115. Aspirates became de-aspirated in prim. Greek as also in prim. Sanskrit when the next syllable or the next but one began with an aspirate :—

παχύς, *thick, large, stout*, Skr. *bahúh*, *abundant*; *πείθω*, Lat. *fido*, Indg. **bhéidhō*; *πεύθεται*, *he asks, inquires*, Skr. *bōdhati*, *he learns, is awake*; *πυθμήν*, Skr. *budhnáh*, *bottom, depth*; *ἀμπέχω* from **ἀμφ-έχω*.

τάχιστος : *θάσσω*, *θάπτω*; *τίθημι* from **dhidhēmi*, Skr. *dádhdhāmi*, *I put, place*; *τρέχω* : *θρέξομαι*; *τρέφω* : *θρέψω*; *τριχός* : *θρίξ*.

κέχυμαι, *κέχυκα* : *χέω*; *κέχρημαι* : *χράομαι*; *κεφαλή* from **χεφαλά*; *λικριφίς* : *λέχριος*.

And similarly with the spiritus asper, as *ἄμαθος* : Engl. *sand*; *αῖθος* from **aǵhos* older **hauhos*, Lith. *saũsos*, *dry, withered*; *ἔδεθλον* : *ἔδος*, Skr. *sádas*, *seat*; *ἔχω* : *ἕξω*, *σχαῖν*. See § 213, 1.

NOTE.—Forms like *πεύσομαι*, *πείσω*, *ἐχύθην*, *ἐφάνθην*, &c. were new formations due to the influence of forms like *πεύθομαι*, *πείθω*, *χέω*, *φαίνω*.

§ 116. A tenuis, whether original or from an older media (§ 106), was written tenuis aspirata before a following *θ*. This was not a sound-change but merely a kind of graphic assimilation, as ἐκλέφθην, ἐπέμφθην, ἐρρίφθην, ἐτρέφθην, ἐπλέχθην : κλέπτω, πέμπω, ῥίπτω, τρέπω, πλέκω ; ἐτρίφθην, ἐλέχθην, ἐμίχθην : τρίβω, λέγω, μίγνυμι.

ASSIMILATION OF CONSONANTS.

§ 117. π, β, φ + μ > μμ, as βλέμμα : βλέπω ; λείμμαι : λείπω ; ὄμμα from *ὄπμα : Lat. *oculus*, Lith. *akis*, *eye* ; τέτριμμαι : τρίβω ; γράμμα, γέγραμμαι : γράφω ; ψάμμος : ψαφαρός.

βν > μν, as ἄμνός from *ἄβνός : Lat. *agnus* ; ἐρεμνός : ἔρεβος ; σεμνός : σέβομαι.

δ, τ + π > ππ, as Hom. ὄππως from *ὄδ-πως ; κάππεσε from *κατ-πεσε.

δλ > λλ, as Lac. ἐλλά, Lat. *sella*, from *sedlā : OE. *setl*, *seat* ; πέλλυτρον from *πέδ-λυτρον.

γν > γν, as γίγνομαι = γίγνομαι. See § 189.

λν > λλ, as ὄλλυμι from *ὄλνυμι ; Lesb. βόλλομαι from *βόλνομαι.

Before explosives ν became the corresponding homorganic nasal, as παλίμπαις, συμβάλλω, παλιγγενεσία.

νλ > λλ, as παλίλλογος, σύλλογος.

νμ > μμ, as ἐμμένω, σύμμαχος.

νρ > ρρ, as συρράπτω, συρρέω.

Antevocalic μσ > μμ in Lesb. and Thess., which became simplified to μ in the other dialects with lengthening of the preceding vowel, as Lesb. ἔνεμμα, Att. Ion. ἔνειμα, Dor. ἔνημα : νέμω. See § 216.

Antevocalic νσ > νν in Lesb. and Thess., which became simplified to ν in the other dialects with lengthening of the preceding vowel, as Lesb. μῆννος, Thess. μειννός, Dor. Att. Ion. μηνός : Lat. *mēnsis*. See § 216.

Medial σλ > λλ, which remained in Lesb., after short

vowels, but became simplified to λ in the other dialects, as Lesb. ἴλλας, Att. ἴλαος, from *σισλαφος. See § 215.

Medial σμ > μμ in Lesb. and Thess., which became simplified to μ in the other dialects with lengthening of the preceding vowel, as Lesb. Thess. ἐμί, Dor. ἡμί, Att. Ion. εἰμί : Skr. ásmi, *I am*. See § 214.

Medial σν > νν in Lesb. and Thess., which became simplified to ν in the other dialects, as Lesb. φαεννός, Ion. φαεινός, Att. φᾶνός, from *φαφεννός. See § 214.

On the prim. Gr. assimilation of the combination τσ, see § 166.

τσν > νν, as βλέννος from *βλετσνός, see § 223.

THE SEMIVOWELS.

§ 118. w and j, generally called u- and i-consonant, are the consonants corresponding to the vowels u and i with which they often interchange in different forms of the same word, as Indg. *swépnoś, Skr. svápnaḥ, beside *supnós, Gr. ὕπνος; Ion. γούνα from *γονφα beside γόννυ; φεύγω beside ἐφυγον; Indg. *djēús, Skr. dyāúḥ, *sky*, Gr. Ζεὺς beside loc. Skr. diví, Gr. Διφί; Indg. *jénti, Skr. yánti, *they go*, beside *imés, Skr. imáh, Dor. ἴμες, *we go*; λείπω beside ἔλιπον. In many philological works u- and i-consonant are written ʷ and ʲ in order to indicate their close relationship to the vowels u and i. In this grammar they are written u and i when they form the second element of a tautosyllabic diphthong, as φεύγω, λείπω, οἴκει, Ζεῦ, in all other positions they are written w or respectively f and j. It should be noted that u-consonant remained in the oldest period of the language not only as the second element of diphthongs but also in other positions; whereas i-consonant only remained as the second element of tautosyllabic diphthongs, in all other positions it either disappeared or became some other sound.

Beside i-consonant it is generally supposed that the Indg.

parent language had a spirant *j* initially which is represented in Greek by ζ, but which fell together with *i*-consonant in all the other Indg. languages, cp. ζυγόν, Skr. *yugám*, Lat. *jugum*, Goth. *juk*, *yoke*, beside υμεῖς, Skr. *yūyám*, Goth. *jus*, Lith. *jūs*, *ye*. It is probable however that this distinction is not original, but is due to a sound-change which took place in prim. Greek under conditions that have not yet been discovered. See § 227.

§ 119. In the Indg. parent language postconsonantal *w*, *j* alternated with *uw*, *ij*. The former regularly occurred after short and the latter after long syllables. This original distinction was best preserved in Sanskrit. In the other languages it became greatly obscured owing partly to special sound laws which took place in the separate languages, and partly to numerous analogical formations whereby forms with short syllables were remodelled on the analogy of those with long syllables and vice versa. Regular forms were : Ion. οἶλος, Att. ὄλος, from *ὄλφος = Skr. *sárvaḥ*, *whole, all*; and similarly δουρός, *дорός*; *μονος*, *μόνος*; beside gen. ὀφρύος from *ὀφρύφος = Skr. *bhruváḥ*, cp. OE. nom. pl. *brūwa*, *eyebrows*; ἰχθύος from *ἰχθύφος; δάκρυος from *δάκρυφος : δάκρυ; βότρυος from *βότρυφος : βότρυς; ἀγνύασι from *ἀγνύφασι, cp. Skr. *aśnuvánti*, *they attain*. ἄλλος from *ἄλjos, Lat. *alius*, Goth. *aljís*, *other*; μέσσος, μέσος, from Indg. *médhjos = Skr. *mádhyah*, Lat. *medius*, Goth. *midjís*, *middle*; πεζός from *πεδjός = Skr. *pádjaḥ*, *on foot*; λεία from *λέφανja; beside ἄγριος from *ἄγριjos = Skr. *ajríyah*; νή(φ)ιος = Skr. *nāvíyah*; πάτριος, Skr. *pítriyah*, Lat. *patrius*, Indg. *petrijos, *paternal*; ἄκριος from *ἄκριjos : ἄκρις; gen. τριῶν = Goth. *prijē*.

w

§ 120. Indg. *w*, which probably had the same sound-value as NE. *w* in *win*, remained in the oldest period of all the Greek dialects. It was the sixth letter of the

alphabet and was called digamma by later grammarians. In Att. Ion. it disappeared so early that hardly any trace of it is left, but in the other dialects the sound remained until far into historic times, as is shown by inscriptions in the various dialects. It also began to disappear in these dialects about the end of the fifth century B. C. In all the dialects it began to disappear earlier medially than initially, and initially earlier before *o*, *ω*, *ov* than before other vowels. Upon metrical grounds it can be shown that *f* must have been a living sound at the flourishing period of the Greek epic. It was also still in existence initially among the Boeotians at the time they adopted the Ionic alphabet at the end of the fifth century B. C.

§ 121. Initial *w* disappeared in Att. Ion., but remained in the oldest period of the other dialects. It also remained in Latin and the old Germanic languages, but became the spirant *v* (= NE. *v*) in Sanskrit and the Baltic-Slavonic languages, and *f* in O. Irish, as *oīda*, Hom. *foīda*, Skr. *vēda*, OE. *wāt*, *I know*, Lat. *vidēre*; *είκοσι*, Dor. *féikaτι*, Boeot. *fíκατι*, Skr. *viśatí*, Lat. *viginti*, O. Ir. *fiche*, *twenty*; *οἶκος*, Cypr. *foīkos*, Skr. *vēśāḥ*, *house*, Lat. *vīcus*, Goth. *weihs*, *village*; *ἔχος*: Pamph. *féχω*, Skr. *vāhāmi*, Lat. *veho*, OE. *wege*, *I carry*; *ἔργον*, Cretan *féργον*, Elean *fάργον*, OE. *weorc*, *work*; and similarly *ἔαρ*, Lat. *vēr*; *ἔπος*, Lat. *vōx*; *ἔσθής*, Lat. *vestis*; *ἔτος*, Lat. *vetus*; *ἰός*, Lat. *vīrus*; *ἰς*, *ίς*, Lat. *vīs*; *ἵτέα*, Lat. *vītis*; *οἶνος*, Lat. *vinum*. *λάσιος* from **φλάπιος*; *λύκος*, Skr. *vṛkaḥ*, OE. *wulf*, Lith. *vilkas*, Indg. **wlqos*, *wolf*. Att. *ρήτρᾱ*, Elean *φράτρᾱ*, *saying, maxim*, Skr. *vratām*, *command*; *ρίζα*, OE. *wyrt*, *root*; Att. *ρήξις* = Lesb. *φρήξις*. Initial *f* before consonants was sometimes written *β* in Lesbian and Boeotian. But as Lesbian inscriptions of the fourth century B. C. have only *ρ* it follows that the *βρ* in earlier Lesbian was merely graphical.

NOTE.—In a few instances we have the spiritus asper where

we should regularly expect the lenis, as Att. ἔννῦμι from *ῥέονῦμι beside ἔσθής; ἕσπερος, Lat. *vesper*; ἑστιά, Lat. *Vesta*; ἡλος, Lat. *vallus*; ἵστωρ beside ἰστωρ; ἑκών, *willing*, Skr. *váśah*, *will, pleasure*. A satisfactory explanation for the spiritus asper in these words has not yet been found. It is highly probable that it has nothing to do with the *f*, but is due to the unsettled state of the spiritus asper in Attic of the fourth century B. C. Cp. its misuse in words like ἄπτω, Lat. *apto*; ἕως, Hom. ἡώς, Dor. ἄως; ἵππος, Lat. *equus*.

§ 122. Intervocalic *f* disappeared in Att. Ion., but is frequently met with in some of the other dialects, as Att. Ion. νέος, Skr. *návah*, Lat. *novus, new*; ἐν-νέα, Skr. *náva*, Lat. *novem, nine*; οἷς, Skr. *áviḥ*, Lat. *ovis*, Lith. *avis, sheep*, Goth. *awistr, sheepfold*; πῖων, *fat*, Skr. *pívan-, swelling*; ἡ-ίθεος *ἡ-φιθεῖος, *bachelor*, Skr. *vidhāvā*, O. Ir. *fedb*, OE. *widewe, widow*, cp. Lat. *vidua*; gen. Δι(ῥ)ός, Lat. *Jovis*, cp. Skr. *diváh*, *of the sky*; gen. Att. βασιλέως, Hom. βασιλῆος, Cypr. βασιλῆφος; κλέος, dial. of Phocis κλέφος, Skr. *śrávah*, *renown*; φαεινός from *φαφεσνος; χαρίεις from *χαριφεντς (§ 69, 1); λείαινα from *λέφανια; ῥέει, Skr. *srávati, it flows*; and similarly θέω, θρέομαι, νέω (aor. ἔνευσα), πλέω, πνέω, χέω; ῥόος, ῥοῦς, Cypr. ῥόφος, Skr. *srávah*, Lith. *sravà, stream*; and similarly θοός, πλόος, χόος. It also disappeared between a diphthong and a following vowel, as λαιός, Lat. *laevus*; οἶος, Cypr. οἶφος; on forms like δᾶήρ from *δαιφῆρ, ~~δαί~~, Cypr. and dial. of Phocis αἰφέι, see § 57.

§ 123. Medial *f* before *p* and *λ* regularly combined with a preceding vowel to form a diphthong, as Aeol. ἀπούρᾱς from *ἀποφῥᾱς; εὐράγη, αὐρηκτος, Att. ἐρράγη, ἄρρηκτος; καλαῦροψ; ῥόπαλον older *ῥόπαλον; ταλαῦρῖνος = ταλάφρῖνος, cp. Lesb. φρῖνος, *skin, hide*. Forms like Att. ἐρράγη, ἄρρηκτος, ἔρρηξα, ἔρρωγα; ἐρρήθην, ἄρρηκτος beside ῥήτος had their *pp* from the initial position before *pp* became simplified to *p*, see § 138.

§ 124. Indg. postconsonantal **w**. In this combination it is necessary to take into consideration the nature of the preceding consonant.

1. **f** disappeared after **π**, **φ**, **θ**, **κ** = Indg. **p**, **bh**, **dh** (**gh**), and pure velar **q** (§ 195), as *νήπιος* from **νη-πfιος*, *infans*. *ὑπερφίαλος*, *φίτν*, from **ὑπερ-φfιαλος*, **φfίτν*, root **bheu-*, *be*. *θνητός*, *θάνατος* from **θfnāτός*, **θfάνατος*, cp. Skr. *dhvāntāḥ*, *covered, dark*; *ὀρθός*, Skr. *ūrdhvāḥ*, *straight*; *θαιρός*, *θολός*, *θεός*, *μέθη* from **θfarpjos*, **θfολός*, **θfεσος*, **μέθfη*; *θήρ*, Lesb. *φήρ*, Lith. *žvėris*, *wild animal*, Lat. *ferus*. *καπνός*, Lat. *vapor*, Lith. *kvāpas*, *smoke, vapour*.

2. **kw** became **ππ** which was simplified later to **π** initially, as *ἵππος*, Skr. *āśvaḥ*, Lat. *equus*, *horse*, Goth. *aíhva-tundi*, *thornbush*, lit. *horse tooth*; Boeot. *τὰ ππάματα* beside Dor. *πάμα*, *πάσασθαι*, from **kwā-*, cp. Skr. *śvātrāḥ*, *flourishing, prosperous*.

3. Initial **tw** became **σσ** which was simplified later to **σ**-, as *σέ*, Skr. *tvā*, *tvām*, *thee*; *σός*, Skr. *tvāḥ*, *thy*; *σάκος* beside *φερε-σσакής*, cp. Skr. *tvác-*, *hide, skin, cover*; *σείω* beside Hom. *ἐπι-σσειών*, cp. Skr. *tviṣ-*, *to be excited*; *σορός*, *coffin*, Lith. *tveriù*, *I hold, contain*. Medial **tw** became **-ττ-** in Att. and Boeot., and **-σσ-** in the other dialects, as Att. *τέτταρες*, Boeot. *πέτταρες*, Hom. *τέσσαρες*, Skr. *catvāraḥ*, Goth. *fidwōr*, *four*.

4. **f** disappeared after **δ**, as *δῖς*, Skr. *dvīḥ*, O.Lat. *duis*, later *bis*, *twice*; *δώ-δεκα*, Skr. *dvā-dāsa*, *twelve*, cp. Goth. *twái*, *two*; in Homer sometimes with metrical lengthening of a preceding short vowel or with doubling of the **δ**, as Hom. voc. *ἄδεές*, *οὐδός*, *δείδιμεν*, Att. *ἄδεές*, *ὀδός*, *δέδιμεν*; Hom. *θεουδής* from **θεοδfής*, *ἔδδεισεν*, root **dwei-*, *to fear*.

5. Initial **sw** became the spiritus asper in Att. Ion., as *ἐκυρός*, Skr. *śvāśuraḥ*, Goth. *swaihra*, *father-in-law*; *ἡδύς*, Dor. *ἄδύς*, Skr. *svādúḥ*, Lat. *suāvis* from **swādwis*, OE. *swēte*, *sweet*; *ὅς*, Skr. *svāḥ*, *his*; Hom. *ὄππως* from **σfοδ-πως*; and similarly *ἐ, οἶ*, Hom. *ὄττι*, from **σfε*, **σfοι*, **σfοδ-τι*.

Intervocalic **-sw-** disappeared with lengthening of the preceding vowel, as Dor. *νᾱός*, Ion. *νηός*, Att. *νεώς* (§ 72), from **νασφος*; *τελήεις* from **τελεσφεντς* (§ 69, 1); *ἴος* from **ἰσφος*, *arrow*.

6. The combinations *νf*, *ρf*, *λf* remained unchanged in some dialects until after the beginning of historic times. In Ionic and some of the Doric dialects the *f* disappeared with lengthening of a preceding vowel, and in Attic and the other dialects without such lengthening, as Ion. *τίνω*, Att. *τίνω* from **τινfw*, cp. Skr. *cinváti*, *cinóti*, *he arranges, piles up*; and similarly Ion. *κιχᾶνω*, *φθᾶνω*, *φθίνω*, beside Att. *κιγχανώ*, *φθάνω*, *φθίνω*; Ion. *εἵνατος*, *κεινός*, *μόνος*, *ξείνος*, beside Att. *ἐνατος*, *κενός*, *μόνος*, *ξένος*. Ion. *οὔλος*, Att. *ὄλος*, Skr. *sárvaḥ*, *all*; Ion. *καλός*, Att. *καλός*, Dor. *καλβός*. Ion. *κούρη*, Cret. *κώρᾱ*, Att. *κόρη*, Arcad. *κόρφᾱ*; Ion. *εἶρομαι*, *δουρός*, *φᾶρος*, *οὔρος*, Att. *ἔρομαι*, *δορός*, *φάρος*, *δρος*.

§ 125. Medial *f* disappeared before *j*, as *δίος* from **διfjos*, Skr. *divyáḥ*, *divine, celestial*; *τεσσαράβοιος* from **-βοfjos* = Skr. *gávyaḥ*, *consisting of or relating to cattle*; *δαίω*, from **δαfjō*, **κλαfjō*. See § 129, 5.

§ 126. *f* disappeared between consonants, as Hom. *τέτρατος* from **τέτfρατος*, Lith. *ketviřtas*, *fourth*; Ion. *τετρώκοντα* from **τετfρω*; fem. *πολλή* from **πολfjā*, cp. Skr. fem. *pūrvī*, *many*, gen. *pūrvyāḥ*.

j

§ 127. Initial *j* became in Greek the spiritus asper through the intermediate stage of voiceless *j*. It remained in all the other Indg. languages with the exception of Old Irish where it disappeared, as *ἦπαρ*, Skr. *yákr̥t*, Lat. *jecur*, Lith. pl. *jeknos*, *liver*; *ὅς*, Skr. *yáḥ*, *who*, Goth. *ja-bái*, *if*; *ὕμεῖς*, Skr. *yūyám*, Goth. *jus*, Lith. *jūs*, *ye*; *ἄξομαι* from **jāxjomai*, *I honour*, Skr. *yájati*, *he honours*.

§ 128. Intervocalic *j* disappeared in Greek, Latin and the Keltic languages, but remained in Sanskrit and the

Baltic-Slavonic languages and also in Gothic between vowels which remained as such in the historic period of the language, as *τρεις*, Cret. *τρέες*, Skr. *tráyaḥ*, Lat. *trēs*, O.Ir. *tri*, Goth. neut. *þrija*, O.Slav. *trije*, Indg. **tréjes*, *three*; *δέω* from **δέjω*; *δέος* from **dʰejos*; gen. *κίος* from **κιός* (§ 330); in adjectives denoting the material of which a thing is made, as *λίθος* from **λίθejos*; and similarly *ἀργύρεος*, *αἶγeos*, *κύνeos*, *οἰκείος*, cp. Lat. *aureus*, *lapideus*; in iterative, causative and denominative verbs, as *ποτέομαι*, Skr. *patáyāmi*, *I hover*; *ὀχέω*, Skr. *vāháyāmi*, *I let drive*, Goth. *wagja*, *I move, shake*; and similarly *τρομέω*, *τροπέω*, *φορέω*, *φοβέω*, cp. verbs like Lat. *doceo*, *moneo*, *noceo*, *torreo*; *τιμάω*, *φιλέω*, from **τιμάjω*, **φιλέjω*; and similarly *ὠνέομαι*, *βασιλεύω*, *νομεύω* (see however § 489), *κονίω*, *μαστίω*, *ἀχλύω*, *γηρύω*, *μεθύω*, cp. verbs like Skr. *dēvayāti*, *he honours the gods*, from *dēvāḥ*, *god*; Lat. *planto*, *albeo*, *fīnio*, *statuo*, from **plantājō*, **albejō*, **finijō*, **statujō*.

§ 129. Indg. postconsonantal *j*. In this combination it is necessary to take into consideration the nature of the preceding consonant.

1. *πj* became *πτ*, as *πτύω* from **πjυjω*, Lith. *spíauju*, *I spit out*; and similarly *θάπτω*, *κλέπτω*, *πτύσσω*, *χαλέπτω*.

2. *λj* became *λλ*, as *ἄλλος*, Lat. *alius*, Goth. *aljis*, *other*; *φύλλον*, Lat. *folium*; *κάλλος*, *beauty*, Skr. *kalyaḥ*, *healthy*; *βάλλω* from **gʷljō* beside *ἔβαλον*; and similarly *ἄλλεσθαι*, *ἀγγέλλω*, *ἰάλλω*, *μέλλω*, *πάλλω*, *ποικίλλω*, *σκάλλω*, *στέλλω*, *τέλλω*.

NOTE.—1. In the Cyprian dial. the *j* merely palatalized the *λ*, and the *λ* thus palatalized was expressed by *ιλ*, as *αἰλων*, *Ἀπειλων* = *ἄλλων*, *Ἀπέλλων*, cp. the similar process in O.Ir. *aile* from **aljōs*, **aljā*, *other*.

3. The combinations *α, ο + vj*, *ρj*, *fj* became *αιν*, *αιρ*, *αι*, *οιν*, *οιρ*, as *δραίνω* from **δρανjω*, Indg. **dr̥njō*; and similarly *κραίνω*, *μαίνομαι*, *μελαίνω*, *ὀνομαίνω*, *ποιμαίνω*,

ξαίνω; σπαίρω from *σπαρῖω, Indg. *sprijō; and similarly ἐχθαίρω, σκαίρω; δαίω from *δαφῖω; κοινός from *κονῖός, older *κομῖός, cp. Lat. *cum*; μοῖρα from *μορῖα. For further examples see § 75.

4. *vj*, *ρj*, preceded by *ε*, *ι*, *υ*, became *νν*, *ρρ*, which remained in Lesbian, but became simplified in Att. Ion. with lengthening of the vowel, as Att. Ion. κτείνω, φθείρω, Arcad. φθήρω, κλίνω, οἰκτίρω, ὀλοφύρομαι, beside Lesb. κτέννω, φθέρρω, κλίννω, οἰκτίρρω, ὀλοφύρρω; and similarly τείνω, ἐγείρω, κείρω, μέιρομαι, πείρω, τείρω, κρίνω, πλύνω, κύρω, μύρομαι. See § 69, 3.

5. *f* disappeared in the intervocalic combination *fj* and then the *j* combined with the preceding vowel to form a diphthong, except in the case of *ι* which simply became lengthened, as δαίω, εὐρεῖα, τεσσαράβοιοι, from *δαφῖω, *εὐρέφῖα, *-βοφῖος, but δῖος from διφῖος. See 3 and 4 above.

6. Indg. *t*, *th*, *dh*+*j* became *τσ* in prim. Greek. *τσ* then became *σ* initially and medially after long vowels, diphthongs, and consonants, but medially between vowels it became *ττ* in Boeotian and Cretan (Cret. also ζ), *σ* in Attic and Ionic, and *σσ*, *σ* in the other dialects, as σοβέω, *I scare away*, Skr. *tyājayati, he expels*; σῆμα, Dor. σᾶμα, from *θῖαμα, *sign, token*, Skr. *dhyāman-, thought*; αῖσα, πᾶσα, δόξα, from *αῖτῖα, *παντῖα, *δοκτῖα; nom. acc. neut. pl. Att. ἄττα, Ion. ἄσσα, from *ἄ-τῖα; τετραξός from *τετραχθῖος: τετραχθά; Ion. διξός, τριξός: διχθά, τριχθά; Lesb. Hom. μέσσος, Att. Ion. μέσος, Skr. *mādhyaḥ*, Lat. *medius*, Goth. *midjis, middle*; Hom. νεμεσσάω, Att. νεμεσάω, from *νεμετῖαω; and similarly πόσος, πρόσσω, τόσος, Att. Ion. πόσος, πρόσω, τόσος; Boeot. ὀπόττος, Cret. ὀπόττος, Att. ὀπόσος.

NOTE.—2. The presents of verbs in *-ῖω*, the comparatives in *-ῖων* and feminines in *-ῖα*, formed from dental stems, were in all the dialects remodelled on the analogy of those formed from *κ*-stems (see 7 below), as λίσσομαι: aor. λιτέσθαι; ἐρέτω,

ἐρέσσω : ἐρέτης ; κορύσσω : κόρυς, stem κόρυθ-, like πέττω, πέσσω ;
μαλάττω, μαλάσσω μαλακός. Att. κρείττων, Ion. κρέσσων like
ἥττων, ἥσσω : ἥκιστα. κίττα, κίσσα : κοῖται ; μέλιττα, μέλισσα :
gen. μέλιτος ; θήσσα : θής, gen. θητός, like ἄνασσα : ἄναξ ;
φοίνισσα : φοῖνιξ.

7. Indg. *k*, *q*, *kh*, *qh*, *gh*, *gh+j* became *ττ* in Att. Boeot. Thessal. Cret. (Cret. also *θθ*), but *σσ* in the other dialects, as Att. *πίττα*, Ion. *πίσσα*, from **πικja*, Lat. *pīx*, Lith. *pikis*, *pitch* ; Att. *πέττω*, Ion. *πέσσω*, *I cook, ripen*, Skr. *pácyatē*, *it ripens* ; Att. *θάττων*, Ion. *θάσσω*, cp. *ταχύς* ; and similarly Att. *πράττω*, *πλήττω*, *ἐλάττων*, *ταράττω*, *γλώττα* = Ion. *πρήσσω*, *πλήσσω*, *ἐλάσσω*, *ταράσσω*, *γλώσσα*.

ττ, *σσ* were simplified to *τ*, *σ* initially, as Hom. *σεῦε* beside *ἔσσευε*, cp. Skr. *cyávatē*, *he moves himself* ; Att. *τήμερον*, Ion. *σήμερον*, from **κjāμερον* ; Att. *τεῦτλον*, Ion. *σεῦτλον*.

8. Indg. *dj* and *g*, *g+j* became in prim. Greek *dz* and then later *zd* by metathesis. Initial *dz* became *δ* in Boeot. Cret. and Laconian, but *ζ* (= *zd*) in the other dialects. Medially after consonants it became *δ* in all the dialects. Medially after vowels it became *δδ* in Boeot. and Cretan, but *ζ* (sometimes written *σδ*) in the other dialects, as Att. Ion. *Ζεύς*, Boeot. Cret. and Laconian *Δεύς*, Indg. **djēus*, cp. Skr. *dyāúh*, *sky* ; Boeot. Cret. *δῶει* = Att. Ion. *ζῶη*. *ἔρδω* from **ἔργjō*. *πεζός* from **πεδjós*, Skr. *pádyah*, *on foot* ; *σχίζω*, cp. Skr. *chidyátē*, *it is cut off* ; *ρέζω*, Boeot. *ρέδδω*, from **ρέγjō* ; *σφάζω*, Boeot. *σφάδδω*, from **σφάγjō* ; and similarly *ἔζομαι*, *ἐλπίζω*, *μιγάζομαι*, *ἄζομαι*, *ἀρπάζω*, *νίζω*.

9. Initial *sj* became the spiritus asper through the intermediate stage of voiceless *j*, as *ύμήν*, *thin skin*, *ύμνος*, *hymn*, song, Skr. *syūman-*, *string, cord*, *syūtāh*, *sewn*.

The medial combinations *asj*, *osj*, *esj*, *usj* became *αι*, *οι*, *ει*, *υι*, but *isj* became *ι*, as *ναίω* from **ναςjō*, cp. *νάσσαι* ;

λιλαίομαι from *λιλασῶμαι; Hom. τοῖο from *τοσῶ = Skr. *tásya*; Hom. τελείω, τελέω, Att. τελῶ, from *τελεσῶ, εἶην from *ἑσῆην, Skr. *syám*, *I may be*; Hom. ἰδυῖα from *φιδυσῶ = Skr. *vidúṣi*, gen. *vidúṣyāḥ*; κονίω from *κονισῶ. For further examples see § 76.

§ 130. *j* disappeared after a consonant + nasal, as ἐλαύνω from *ἐλαφνῶ; θέρμω from *θερμῶ; φαείνω from *φαεσνῶ; and similarly μέριμνα, τόλμα.

THE LIQUIDS.

§ 131. The Indg. parent language had two liquids: *l* and *r*. Apart from cases of dissimilation, which are common in most languages, the two sounds were regularly kept apart in Armenian and the European languages, but in Iranian and partly also in the Indian group of dialects they fell together in *r*. According to Whitney, *Sanskrit Grammar*, § 53, 'r and l are very widely interchangeable in Sanskrit, both in roots and in suffixes, and even in prefixes: there are few roots containing *l* which do not show also forms with *r*; words written with the one letter are found in other texts, or in other parts of the same text, written with the other. In the later periods of the language they are more separated, and the *l* becomes decidedly more frequent, though always much rarer than the *r*.' From this it may be inferred that where *l* and *r* exist side by side in the same word, it is due to a mixture of dialects, as in *léhmi* beside *réhmi*, *I lick*.

1

§ 132. Indg. *l* generally remained in Greek as also in the other European languages, as ἄλλος, Lat. *alius*, O.Ir. *aile*, Goth. *aljis*, *other*; ἄλς, Lat. *sāl*, O.Ir. *salann*, OE. *sealt*, *salt*; ἀμέλω, Lat. *mulgeo*, OE. *meolce*, *I milk*; κλέπτω, Lat. *clepo*, Goth. *hlifa*, *I steal*; κλυτός, Skr. *śrutáḥ*, Lat. *in-clutus*, *renowned*, cp. O.Ir. *cloth*, *renown*, OE. *hlēoþor*, *sound, melody*; λείπω, Lat. *linquo*, Lith.

lëkù, *I leave*, Skr. riṇákti, *he leaves*, Goth. leiwa, *I lend*; pf. λέλοιπα = Skr. riréca; λείχω, Skr. réhmi, lēhmi, Lat. lingo, OE. liccie, *I lick*; λέχος, Lat. lectus, O.Ir. lige, *bed, couch*, OE. licgan, *to lie down*; νεφέλη, Lat. nebula, OHG. nebul, *cloud, mist*; Ion. οὔλος, Att. ὄλος, Skr. sárvaḥ, *whole, all*.

§ 133. In some of the Doric dialects λ became ν before τ and θ, as βέντιστος, φίνταται, ἐνθών, ἦνθες = βέλτιστος, φίλταται, ἐλθών, ἦλθες.

§ 134. In the Cretan dialect anteconsonantal λ became u-consonant and then combined with the preceding vowel to form a diphthong, as αὐκά, αὐγεῖν = ἀλκή, ἀλγεῖν; θεύγω, εὐθεῖν, ἀδευφιαί = Hom. θέλγω, ἐλθεῖν, ἀδελφεία, *sisters*. Cp. Mod. northern dialects aud, oud, *old*; kaud, koud, *cold*.

§ 135. Occasionally λ became ρ and vice versa by dissimilation. This phenomenon is common in all the Indg. languages and especially in Greek and Latin, as ἀργαλέος from *ἀλγαλέος; κεφαλαργία beside κεφαλαλγία; Lat. Aleria beside Ἀλαλία; Lat. caeruleus : caelum. θηλητήρ beside θηρητήρ; μορμολύττομαι : μόρμορος; Lat. culter from *certros; pelegrinus from peregrinus; frāglo beside frāgro.

r

§ 136. Indg. r generally remained in Greek, as ἐρυθρός, Skr. rudhiráḥ, Lat. ruber, O.Ir. ruad, OE. rēad, Lith. raũdas, *red*; ἔρεβος, Skr. rájas-, Goth. riqis, *darkness*; ἔρπω, Skr. sárpāmi, Lat. serpo, *I creep*; φέρω, Skr. bhárāmi, Lat. fero, O.Ir. berim, Goth. baíra, O.Slav. berā, *I bear*; τρεῖς, Skr. tráyaḥ, Lat. trēs, O.Ir. trí, Goth. þreis, O.Slav. trije, *three*; ἀρώ, Lat. aro, Goth. arja, Lith. ariù, *I plough*, O.Ir. arathar, *plough*; ἀγρός, Lat. ager, Goth. akrs, *field*, Skr. ájraḥ, *a plain*; πόρκος, Lat. porcus, OE. fearh, *pig*; πατήρ, Skr. pitár-, Lat. pater, O.Ir. athir, OE. fæder, *father*. See § 77.

§ 137. Indg. *sr* became voiceless *pp* which was later simplified to *ṣ* initially, as *ῥέω*, Skr. *srāvāmi*, Lith. *sraviù*, *I flow*, beside *κατα-ῥέω*; *ῥοφέω*, Lat. *sorbeo*, Lith. *srebiù*, *I gulp down*. See § 215.

§ 138. Indg. *wr* became *ṣ* initially (through the intermediate stage of *pp*) in the course of the individual dialects, as Att. *ῥήτρᾱ*, Elean *φράτρᾱ*, *saying, maxim*, Skr. *vratám*, *command, saying*. See § 121.

THE NASALS.

§ 139. The Indg. parent language had four kinds of nasals—labial *m*, dental *n*, palatal *ñ*, and velar *ŋ*, corresponding to the four classes of explosives *p*, *t*, *k*, *q*. Of these the palatal and velar nasals only occurred before their corresponding explosives and underwent in the different languages all changes in the place of articulation in common with these explosives, as Indg. **pénqe* = *πέντε*, Lesb. *πέμπε*, Skr. *pāñca*, Goth. *fimf*, Lith. *penki*, *five*; Indg. **pénqtos* = *πέμπτος*, Lat. *quīntus*, Goth. *fimfta*, Lith. *peñktas*, *fifth*; Indg. **añghō* = *ἄγχω*, Lat. *ango*, cp. Goth. *aggwus*, OE. *enge*, *narrow*. The dental and labial nasals occurred also in other positions. All the nasals had in Greek a weak articulation before explosives and *σ* which accounts for their frequent omission on inscriptions and for nasals of all kinds being expressed by *ν* in archaic Greek orthography.

m

§ 140. Indg. *m* generally remained initially and medially in Greek, as Att. Ion. *μήτηρ*, Dor. *μάτηρ*, Skr. *mātár*-, Lat. *māter*, O.Ir. *māthir*, OE. *mōdor*, O.Slav. *mati*, *mother*; *μέλι*, Lat. *mel*, O.Ir. *mil*, Goth. *milip*, *honey*; *μῦς*, Skr. *mūś*-, Lat. OE. *mūs*, *mouse*; *γόμφος*, *bolt, nail*, Skr. *jāmbhaḥ*, *tooth*, OE. *camb*, *comb*; *εἰμί*, Skr. *ásmi*,

Lat. *sum*, Lith. *esmi*, *I am*; *έμέω*, Skr. *vāmāmi*, Lat. *vomo*, *I vomit*; *ήμι*, Skr. *sāmī*, Lat. *sēmi*, OE. *sam*-, *half*; *φέρωμεν*, Skr. *bhārāmaḥ*, Lat. *ferimus*, Goth. *baíram*, *we bear*.

§ 141. Final *m* became *n*, as *έκατόν*, Skr. *śatām*, Lat. *centum*, *hundred*; *ζυγόν*, Skr. *yugām*, Lat. *jugum*, *yoke*; *έφερον* = Skr. *ábharam*, cp. Lat. *eram*; gen. pl. *λύκων* = Skr. *vṛkāṇām*; acc. sing. of vocalic stems, as *λύκον* = Skr. *vṛkam*, Lat. *lupum*; *τόν* = Skr. *tām*, Lat. *is-tum*; Skr. *áśvām* = Lat. *equam*, cp. *χώραν*; *τήν* = Skr. *tām*, Lat. *is-tam*; *βάσιν* = Skr. *gátim*, cp. Lat. *partim*, *sitim*; *ήδύν* = Skr. *svādúm*. *έν*, *χθών*, Skr. *kṣam*-, *earth*; *χιών*, Lat. *hiem*-, *winter*, from **έμ*, **χθώμ*, **χιώμ*, with *ν* levelled out into the oblique cases: *ένός*, *χθονός*, *χιόνος*, &c.

§ 142. *mj* became *nj*, as *βαίνω* from **βανjω*, older **βαμjω*, Indg. **gmjō*, Lat. *venio*, cp. Goth. *qiman*, *to come*; *κοινός* from **κομjος*, older **κομjος*, cp. Lat. *cum*, *com*-, and *quoniam* from **quom-jam*.

§ 143. *mt* became *nt*, as *αντλον*, cp. *άμάω*, *I gather in*; *βροντή*, cp. *βρέμω*, *I roar*; *γέντο*, *he grasped*, cp. M.Ir. *gemel*, *fetter*.

§ 144. *ms* became *ns* and then the nasal disappeared in all the dialects in the combination *ns* + consonant without lengthening of the preceding vowel (see § 153), as *δεσπότης* from **δεμς*, gen. of **δεμ*-, *house*. When the *ns* was not followed by another consonant the nasal disappeared in most of the dialects with lengthening of the preceding vowel, as Att. Ion. *είς*, Dor. *ής*, but Cret. *ένς*, from **έμς*, cp. Lat. *semel*, *semper*.

§ 145. *ml*, *mr* became *mb*, *mbr* which were simplified to *bl*, *br* initially, as *βλώσσω*, *μέμβλωκα*, *έμολον*; *βλαδαρός*, *flaccid*, Skr. *mṛdúḥ*, *soft*; *βλάξ*, *βληχρός*, beside *μαλακός*; *βλωθρός*, *shooting up*, *high growing*, Skr. *mūrdhā*, *head*; *βλίττω* from **μλιττω*, cp. *μέλι*. *βροτός* = Skr. *mṛtāḥ*, *mortal*, beside *άμβροτος* = Skr. *amṛtaḥ*; *μεσημβρία*, *mid-*

day, beside *ἡμέρᾱ*. Cp. words like NE. **humble**, **number**, Fr. **humble**, **nombre**, beside Lat. acc. **humilem**, **numerus**.

§ 146. Prim. Greek *-μν-*, the weak grade of *-μεν-*, was simplified to *-ν-* after long vowels, as inf. *γνῶναι* from **γνώμναι* beside *γνώμεναι*; and similarly *ἀήναι*, *δαήναι*, *στῆναι*, &c., cp. § 546.

n

§ 147. **n** generally remained in Greek, as *νέος*, Skr. *návaḥ*, Lat. *novus*, Goth. *niujis*, Lith. *naũjas*, *new*; *νέφος*, *cloud*, Skr. *nábhas-*, Lat. *nebula*, OHG. *nebul*, *fog*, *mist*; *νύξ*, Skr. *nákṭih*, Lat. *nox*, Goth. *nahts*, Lith. *naktis*, *night*; *ἡνομα*, Skr. *náma*, Lat. *nōmen*, OE. *nama*, *name*; *ἐννῆ*, *the day before the new moon*, Skr. *sánaḥ*, Lat. *senex*, O.Ir. *sen*, Goth. *sineigs*, Lith. *sėnas*, *old*; *γένος*, Skr. *jána-*, Lat. *genus*, Goth. *kuni*, *race*, *generation*; *γνωτός*, Skr. *jñātáḥ*, *known*; Dor. *φέροντι*, Skr. *bháranti*, Lat. *ferunt*, Goth. *baírand*, *they bear*; *ὑπνος*, Skr. *svápnah*, *sleep*; voc. *κύον*, Skr. *śván*, *dog*, *hound*.

§ 148. Indg. **ln** became **ll** in prim. Greek, Latin, Celtic and Germanic. In Greek it is necessary to distinguish three categories all of which belong to the prehistoric period of the language.

1. The Indg. **ln** which became **ll** in prim. Greek. This **ll** remained in Lesb. and Thessalian, but in the other dialects it became simplified to **l** with lengthening of the preceding vowel, as Lesb. *ἀπ-έλλω*, Dor. *φήλω*, Hom. *έλω*, from **φέλνω*; Lesb. *βόλλομαι*, Thess. *βέλλομαι*, Dor. *δήλομαι*, Att. *βούλομαι* from **βόλνομαι*: Lesb. *βόλλα*, Att. *βουλή*; Hom. *οὔλος* from **φολνος*, *fleecy*; Lesb. Thess. *στάλλᾱ*, Dor. *στάλλᾱ*, Att. Ion. *στήλη*, from **στάλνᾱ*. See § 69, 6.

2. When *λν* came together at a later period it became *λλ* and remained as such in all the dialects, as *πάλλαξ*, *girl*, *Παλλάς*, *Pallas*, epith. of Athena, to stem **παλεν-*, cp. OE. *folā*, *foal*, gen. *folan* for **fulen*; *έλλός*, to stem

**ἐλεν*, cp. O.Slav. *jelen*-, Lith. *ėlnis*, *young deer*; *ὄλλῡμι* from **ὄλνῡμι*, beside *ὀλέσαι*.

3. When *λν* came together at a still later period, it remained, as *πίλναμαι*, *πίλνημι*, *πιλνός*.

§ 149. When *νλ* came together in composition it became assimilated to *λλ*, as *ἄλλεγον*, *ἐλλάμπω*, *σύλλογος*, *παλίλλογος*.

§ 150. *νμ* became assimilated to *μμ*, as *ἐμμένω*, *σύμμετρος*, *σύμμαχος*; pf. *ἤσχυμμαι* : *αἰσχύνω*, *κεκοίλαμμαι* : *κοιλαίνω*, *μεμώραμμαι* : *μωραίνω*.

§ 151. Before explosives *ν* became the corresponding homorganic nasal, as *συμβάλλω*, *συμπλέω*, *συμφεύγω*, *παλίμπαις*, *παλιγγενεσία*, *παλιγκαπηλεύω*.

§ 152. *nr* became *ndr* which was simplified to *dr* initially, as *ἀνδρός* from **άνρως* : *άνήρ*; *σινδρός* : *σιναρός*, *hurt*, *damaged*; Hesychius *δρώψ· άνθρωπος*. Cp. words like NE. *gander*, *thunder*, beside OE. *ganra*, *þunor*.

§ 153. *n* disappeared in prim. Greek before *s* or *z* + consonant without lengthening of the preceding vowel. This sound-change took place both when *s*, *z* were original or arose from some other source, as *κεστός* from **κενστός* : *κεντέω*; *τριᾶκοστος* from **τριᾶκονστός*; imperative mid. *φερόσθων* from **-ονσθων*; *ἐς τοῦτο* beside *ἐνς*, *εἰς αὐτό*; *Ἀθήναζε* from **Ἀθᾶνανε-δε*. *πλάζω* from **πλάνεδω* : *ἐπλαγξα*; *σαλπίζω* from **σαλπίνεδω* : *ἐσάλπιγξα*; *σύζυγος* from **συν-εδυγος*, see § 155. Here belong also the various dialect forms of the acc. pl. of *o*- and *ā*-stems. In prim. Greek the regular endings were: *-ος*, *-ας* when the next word began with a consonant and *-ους*, *-ανς* in pausa and when the next word began with a vowel, as *τὸς λύκους*, but *τὸνς ἐλεύθερους*. This original distinction was fairly well preserved in the dialect of Crete. The other dialects generalized the *-ους*, *-ανς*, the *ν* of which then disappeared with lengthening of the preceding vowel, whence Att. Ion. *-ους*, *-ās*, Dor. *-ως*, *-ās*, Lesb. *-οις*, *-αις*. See § 69, 1.

NOTE.—When *n* came to stand in the above combination at a later period it disappeared with lengthening of the preceding vowel in Att. Ion. and in most of the other dialects, as Att. *ἔσπινται* from **ἔσπινονται* with *ν* re-introduced from the pres. *σπένδω*, the regular form would have been **ἔσπεινται*; Ion. *πέισμα* from **πένσμα* which was a new formation for **πένθμα*.

§ 154. *ν* remained in Arcad. Arg. Cret. and Thessalian before final *-s* and the medial *-σ-* which arose from the assimilation of consonants, but in the other dialects—except Lesbian—the *ν* disappeared with lengthening of a preceding short vowel. In Lesb. the *νσ* became *ισ*, the *ι* of which combined with a preceding short vowel to form a diphthong, as Att. Ion. *εῖς*, Dor. *ῆς*, Cret. *ἔνς*, Lesb. *εῖς*, *one* (§ 144); Att. Ion. *μέλας*, *τάλας*, from **μέλανς*, **τάλανς*; *γίγας*, *τιθείς*, *διδούς*, from **γιγανς*, **τιθενς*, **διδονς*; *πάσα* from **παντja* beside Lesb. *παῖσα*; *διδοῦσα*, *τιθείσα* from **διδοντja*, **τιθεντja*; Att. Ion. *ἄγουσι*, *ἄγωσι* = Dor. and prim. Gr. *ἄγοντι*, *ἄγωντι*, beside Lesb. *ἄγοισι*, *ἄγωσι*.

ñ, η

§ 155. The oldest mode of representing these nasals in Greek was by *ν* which is common on inscriptions. They came to be represented by *γ* after the combinations *gn*, *gm* had become assimilated to *ην*, *ημ* (§ 189), as in Att. *γίγνομαι*, *ἄγμός* = *γίηνομαι*, *ἄημός*. It has already been pointed out that these nasals only occurred in the parent language before their corresponding explosives and underwent in the different languages all changes in the place of articulation in common with these explosives (§ 139). *ñ*: *ἦνεγκα*, *I bore*, Skr. *ānáśa*, *he obtained*, cp. Lat. *nanciscor*; *ἄγχω*, Lat. *ango*, cp. Goth. *aggwus*, *narrow*. *η*: *ἀγκών*, O.Lat. *ancus*, cp. Skr. *aṅkāḥ*, *hook*, OE. *angel*, *fish-hook*; *πέντε*, Lesb. *πέμπε*, Skr. *pāñca*, Lat. *quinque*, O.Welsh *pimp*, Goth. *fimf*, Lith. *penki*, *five*; *λιμπάνω*, Lat. *linquo*, cp. Skr. *riñcānti*, *they leave*.

§ 156. The nasal disappeared with lengthening of the preceding vowel before Ion. $\sigma\sigma$, Att. $\tau\tau$ from prim. Greek χj = Indg. ghj (§ 129, 7), as Ion. $\alpha\sigma\sigma\omicron\nu$ from $*\acute{\alpha}\gamma\chi j\omicron\nu$, cp. $\acute{\alpha}\gamma\chi i$; Ion. $\acute{\epsilon}\lambda\alpha\sigma\sigma\omega\nu$, Att. $\acute{\epsilon}\lambda\acute{\alpha}\tau\tau\omega\nu$, from $*\acute{\epsilon}\lambda\alpha\gamma\chi j\omega\nu$; Ion. $\theta\acute{\alpha}\sigma\sigma\omega\nu$, Att. $\theta\acute{\alpha}\tau\tau\omega\nu$, from $*\theta\alpha\gamma\chi j\omega\nu$.

It also disappeared, but without lengthening of the preceding vowel, before ζ from prim. Gr. γj , as $\kappa\lambda\acute{\alpha}\zeta\omega$ from $*\kappa\lambda\alpha\gamma\gamma j\omega$: Lat. **clango**; $\pi\lambda\acute{\alpha}\zeta\omega$ from $*\pi\lambda\alpha\gamma\gamma j\omega$: Lat. **plango**; $\sigma\alpha\lambda\pi\acute{\iota}\zeta\omega$: gen. $\sigma\acute{\alpha}\lambda\pi\iota\gamma\gamma\omicron\varsigma$.

THE LABIALS.

P

§ 157. Indg. **p** (= Skr. Lat. Lith. O.Slav. **p**, Germanic **f**, **b**. In O.Ir. it disappeared initially and medially between vowels) remained in Greek initially and generally also medially, as $\pi\alpha\tau\acute{\eta}\rho$, Skr. pitár- , Lat. **pater**, O.Ir. **athir**, OE. **fæder**, *father*; $\pi\acute{o}\upsilon\varsigma$, Skr. pât (gen. padāḥ), Lat. **pēs**, OE. **fōt**, *foot*; $\pi\rho\acute{o}$, Skr. prá , Lat. **pro-**, O.Slav. **pro-**, *before*; $\pi\omicron\lambda\acute{o}\upsilon\varsigma$, Skr. purúḥ , O.Ir. **il**, Goth. **filu**, *much, many*; $\pi\lambda\acute{\epsilon}\kappa\omega$, Lat. **plecto**; $\acute{\epsilon}\pi\tau\acute{\alpha}$, Skr. saptá , Lat. **septem**, Goth. **sibun**, *seven*; $\acute{\epsilon}\rho\pi\omega$, Skr. sárpāmi , Lat. **serpo**, *I creep*; $\acute{\upsilon}\pi\acute{\epsilon}\rho$, Lat. **s-uper**, OE. **ofer**, *over*, Skr. upári , *above*; $\acute{\upsilon}\pi\nu\omicron\varsigma$, Skr. svápnaḥ , Lat. **somnus** from $*\text{swepnos}$, O.Ir. **sūan**, *sleep*, OE. **swefan**, *to sleep*; $\kappa\acute{\alpha}\pi\rho\varsigma$, Lat. **caper**.

§ 158. $\pi\mu$ became $\mu\mu$, as $\beta\acute{\lambda}\acute{\epsilon}\mu\mu\alpha$: $\beta\acute{\lambda}\acute{\epsilon}\pi\omega$ (see § 117). π became β before δ , as $\kappa\lambda\acute{\epsilon}\beta\delta\eta\nu$, *by stealth* : $\kappa\lambda\acute{\epsilon}\pi\tau\omega$; $\acute{\epsilon}\beta\delta\omicron\mu\omicron\varsigma$: $\acute{\epsilon}\pi\tau\acute{\alpha}$; $\acute{\epsilon}\pi\acute{\iota}$ - $\beta\delta\alpha\iota$ (nom. pl.), *the day after the feast*, where $-\beta\delta-$ is the weak form of $*\text{ped-}$, *foot*, cp. Skr. upa-bdā- , *stamping, trampling*. See § 107.

B

§ 159. Indg. **b** (= Skr. Lat. O.Ir. Lith. O.Slav. **b**, Germanic **p**) remained in Greek initially and generally also medially, as $\beta\acute{\upsilon}\kappa\tau\eta\varsigma$, *blustering*, Skr. buk-kārah , *the roaring*

of a lion, Lat. *būcina*, *trumpet*, O.Slav. *bučati*, *to roar, bellow*; *βάρβαρος*, *foreign*, Skr. *barbarah*, *stammering*; *βαλλίζω*, *I dance*, Skr. *bal-balīti*, *he whirls*; *λείβω*, Lat. *lībo*; *ῥμβρος*, Lat. *imber*, cp. Skr. *āmbu*, *water*. It should be noted that *b* was a rare sound in the parent Indg. language.

§ 160. On the change of *β* to *π* before voiceless sounds, as in *τρίψω*, *τέτριπται* : *τρίβω*, see § 106. *βμ* became *μμ*, as *τέτριμμαι* : *τρίβω*, see § 117.

ph

§ 161. *ph* was one of the rarest sounds in the parent language. It was preserved in Sanskrit and Greek, but in prim. Latin it fell together with original *bh*, and in prim. Keltic, Germanic and the Baltic-Slavonic languages with original *p*. *σφαραγέομαι*, *I crack, crackle*, Skr. *sphūrjati*, *he cracks*; *σφήν*, Skr. *sphyāh*, *wedge*; *σφέλας*, Skr. *phálakam*, *footstool*, see § 102.

bh

§ 162. Indg. *bh* (= Skr. *bh*, Lat. *f* initially and *b* medially, Germanic *b*, *b̥*, Keltic and Baltic-Slavonic *b*) became voiceless *φ* in Greek, as *φέρω*, Skr. *bhárāmi*, Lat. *fero*, O.Ir. *berim*, OE. *bere*, O.Slav. *bera*, *I bear*; *φράτηρ*, *member of a φράτρᾱ*, Skr. *bhrátar*, Lat. *frāter*, O.Ir. *brāthir*, OE. *brōþor*, *brother*; *ὄφρυς*, Skr. *bhrúh*, OE. *brū*, Lith. *bruvis*, *eyebrow*; *νέφος*, *cloud*, Skr. *nábhas*, Lat. *nebula*, OHG. *nebul*, *mist*; *ὀμφαλός*, Lat. *umbilicus*; *γόμφος*, *nail*, Skr. *jāmbhaḥ*, *tooth*, OE. *camb*, *comb*.

§ 163. *φμ* became *μμ*, as *γέγραμμαι* : *γράφω*, see § 117.

On the change of *φ* to *π* before voiceless sounds, as in *γράφω*, *γέγραπται* : *γράφω*, see § 109. On the de-aspiration of *φ*, as in *πέφευγα* : *φεύγω*, see § 115.

THE DENTALS.

t

§ 164. Indg. **t** (= Skr. Lat. Lith. O.Slav. **t**, O.Ir. **t**, **th**, Germanic **þ**, **ð**, but **t** in the Indg. combinations **pt**, **kt**, **qt**, **st**) generally remained in Greek initially and medially, as *τείνω*, Lat. *tendo*, O.E. *þenne*, *I stretch*, Skr. *tanōti*, *he stretches*; Lat. *tenuis*, O.Ir. *tana*, Lith. *tenvas*, O.E. *þynne*, *thin*; *τατός*, Skr. *tatāḥ*, Lat. *tentus*, *stretched*; *τό*, Skr. *tād*, Lat. *is-tud*, O.E. *þæt*, *the, that*; *τρεις*, Skr. *trāyaḥ*, Lat. *trēs*, O.Ir. *tri*, O.E. *þri*, O.Slav. *trije*, *three*; *τρέμω*, Lat. *tremo*; *πατήρ*, Skr. *pitār*, Lat. *pater*, O.Ir. *athir*, O.E. *fæder*, *father*; *φέρετε*, Skr. *bhāratha*, Lat. (imper.) *ferite*, Goth. *bafrīþ*, O.Slav. *berete*, *ye bear*; *ἔτος*, Lat. *vetus*; *κλυτός*, Skr. *śrutāḥ*, Lat. *in-clutus*, *renowned*, O.Ir. *cloth*, *renown*; *ἔστι*, Skr. *ásti*, Lat. *est*, Goth. *ist*, Lith. *ēsti*, *he is*; *κλέπτης*, Goth. *hliftus*, *thief*; *ὀκτώ*, Skr. *aṣṭāu*, *aṣṭā*, Lat. *octō*, O.Ir. *ocht*, O.E. *eahta*, *eight*.

§ 165. *τπ* became *ππ*, as Hom. *κάππεσον* from *κατέπεσον*: *καταπίπτω*.

§ 166. Prim. Greek *τσ* (§ 109) became a double spirant the precise pronunciation of which is uncertain. Most scholars assume that it was *þþ* (= *th* in Engl. *thin*) or a kind of lisped *ss*. Before and after consonants, and finally it became *σ* through the intermediate stage *σσ* in all the dialects, as Hom. *ἴσος*, Att. *ἴσος*, Cret. *ῥίσφος* from **φισσφος*, older **widswos*; Att. *βάλλουσι*, Cret. *βάλλονσι*, from **βάλλοντσι*: *βάλλον*; *νόσος* from **νόσφος*; *πάσχω* from **πάτσχω*: *παθεῖν*; Att. *ἔσπεια*, Cret. *ἔσπενσα*, from **ἔσπεντσα*: *σπένδω*; *ἔπερσα* from **ἔπερτσα*: *πέρθω*; nom. *νύξ*, *νεότης*, *πούς*, *κόρυς*, *γίγας*, *διδούς*, *τιθείς*, beside stem *νύκτ-*, *νεότητ-*, *ποδ-*, *κόρυθ-*, *γίγαντ-*, *διδόντ-*, *τιθέντ-*.

Medially after long vowels and diphthongs it became *σ* in all the dialects, as dat. pl. *φωσί* from **φωτσί*; *σπεύσω* from **σπεύτσω*: *σπεύδω*; *ἔπεισα* from **ἔπειτσα*: *πείθω*.

Medially between short vowels it became $\tau\tau$ in Boeot. Cret. (Cret. also ζ), σ in Att. Ion., and $\sigma\sigma$, σ in the other dialects, as aor. Hom. $\delta\acute{\alpha}\sigma\sigma\alpha\sigma\theta\alpha\iota$, Att. $\delta\acute{\alpha}\sigma\alpha\sigma\theta\alpha\iota$, Cret. $\delta\acute{\alpha}\tau\tau\alpha\theta\theta\alpha\iota$, $\delta\acute{\alpha}\zeta\alpha\theta\alpha\iota$: $\delta\alpha\tau\acute{\epsilon}\omicron\mu\alpha\iota$; loc. pl. Hom. $\pi\omicron\sigma\sigma\acute{\iota}$, Att. $\pi\omicron\sigma\acute{\iota}$, Skr. $pats\acute{u}$, beside nom. $\pi\acute{o}\delta\epsilon\varsigma$, Skr. $p\acute{a}d\alpha\eta$.

§ 167. Indg. tj became ts in prim. Greek and then had the same further development as the ts in § 166, as Hom. Att. Boeot. $\pi\acute{\alpha}\sigma\alpha$, Lesb. $\pi\acute{\alpha}\iota\sigma\alpha$, Thess. Cret. $\pi\acute{\alpha}\nu\sigma\alpha$, from $*\pi\alpha\nu\tau\acute{\jmath}\alpha$; $\delta\acute{o}\xi\alpha$ from $*\delta\acute{o}\kappa\tau\acute{\jmath}\alpha$; $\alpha\acute{\iota}\sigma\alpha$ from $*\alpha\acute{\iota}\tau\acute{\jmath}\alpha$; Hom. $\tau\acute{o}\sigma\sigma\omicron\varsigma$, $\tau\acute{o}\sigma\omicron\varsigma$, Lesb. $\tau\acute{o}\sigma\sigma\omicron\varsigma$, Att. $\tau\acute{o}\sigma\omicron\varsigma$, from $*\tau\acute{o}\tau\acute{\jmath}\omicron\varsigma$. See § 129, 6.

§ 168. Initial tw - became $\sigma\sigma$ - which was simplified later to σ -, as $\sigma\acute{\epsilon}$, Skr. $tv\bar{a}$, $tv\acute{a}m$, *thee*. Medial $-tw$ - became $-\tau\tau$ - in Att. and Boeot., and $-\sigma\sigma$ - in the other dialects, as Att. $\tau\acute{\epsilon}\tau\tau\alpha\rho\epsilon\varsigma$, Boeot. $\pi\acute{\epsilon}\tau\tau\alpha\rho\epsilon\varsigma$, Hom. $\tau\acute{\epsilon}\sigma\sigma\alpha\rho\epsilon\varsigma$, Skr. $catv\acute{a}r\alpha\eta$, *four*. For further examples see § 124, 3.

§ 169. $\tau\iota$ remained initially and also in the combination $\sigma\tau\iota$, as $\tau\acute{\iota}\sigma\iota\varsigma$, $\acute{\epsilon}\sigma\tau\iota$, $\pi\acute{\iota}\sigma\tau\iota\varsigma$, $\sigma\tau\iota\phi\rho\acute{o}\varsigma$. Medially it partly became $\sigma\iota$ and partly remained. The reason for this two-fold treatment has never been satisfactorily explained. P. Kretschmer—*Kuhn's Zeitschrift*, vol. xxx, pp. 565-91—after investigating the subject in great detail, arrives at the following result : $\tau\iota$ remained medially when the ι was accented, and also finally when the accent was on the penultima, but it became $\sigma\iota$ when the ι was unaccented. On the other hand Brugmann—*Grundriss*, vol. i, p. 662—assumes that the ι became consonantal before vowels, as in $\pi\lambda\acute{o}\upsilon\sigma\iota\omicron\varsigma$ from $*\pi\lambda\acute{o}\upsilon\tau\acute{\jmath}\omicron\varsigma$; gen. Ion. $\beta\acute{\alpha}\sigma\iota\omicron\varsigma$ from $*\beta\acute{\alpha}\tau\acute{\jmath}\omicron\varsigma$ and then the σ was levelled out into the nom. and acc. sing. $\beta\acute{\alpha}\sigma\iota\varsigma$, $\beta\acute{\alpha}\sigma\iota\nu$. A careful examination of the material collected by Kretschmer shows that both explanations leave a large residuum of unexplained forms, even when due allowance is made for a considerable number of analogical formations. The ti -stems and likewise the adjectives in $*\tau\iota\omicron\varsigma$ have $\sigma\iota$, as $\beta\acute{\alpha}\sigma\iota\varsigma$, $\pi\acute{o}\sigma\iota\varsigma$, $\delta\acute{o}\sigma\iota\varsigma$, $\phi\acute{u}\sigma\iota\varsigma$; $\pi\lambda\acute{o}\upsilon\sigma\iota\omicron\varsigma$,

ἐνιαύσιος, ἀμβρόσιος. The pres. third pers. sing. of μ -verbs and the third pers. pl. of ω -verbs have -σι in Att. Ion., but -τι in Dor. and Boeotian, as Att. δίδωσι, τίθησι φέρουσι beside Dor. δίδωτι, τίθητι, φέροντι.

§ 170. τ became σ before a following τ, as ἄπαστος : πατέομαι; κεστός from *κεντ-τός : κεντέω; ὕστερος, Skr. úttarah, latter. See § 110.

d

§ 171. Indg. d (= Skr. Lat. O.Ir. Lith. O.Slav. d, Germanic t) generally remained initially and medially in Greek, as δέκα, Skr. dáśa, Lat. decem, O.Ir. deich, Goth. taifun, OE. tien, Lith. dēzimt-, ten; δίδωμι, Skr. dādāmi, Lat. dō, I give, O.Slav. dati, to give; δόμος, Skr. dāmaḥ, Lat. domus, O.Slav. domŭ, house; δύω, Skr. dvāú, dvā, Lat. duo, O.Ir. dāu, dō, Lith. du, OE. twā, two; ἔδω, Skr. ádmi, Lat. edo, OE. ete, I eat; ἔδος, Skr. sadas-, seat, Lat. sedere, OE. sittan, to sit; καρδίᾱ, καρδίη, Lat. gen. cordis, O.Ir. cride, Lith. szirdis, OE. heorte, heart; οἶδε, Skr. véda, OE. wāt, he knows, Lat. vidēre, to see; acc. πόδα, Skr. pádam, Lat. pedem, OE. fōt, foot.

§ 172. δλ became λλ, as πέλλυτρον from *πέδ-λυτρον, bandage worn by runners on the ankle; Lac. ἐλλά = Lat. sella, from *sedlā, OE. setl, seat.

δπ became ππ, as Hom. ὄππως from *ὀδ-πως older *σφόδ-πως, quomodo.

§ 173. Indg. dj became ζ, as Ζεύς, cp. Skr. dyāúḥ, sky; πεζός, Skr. paḍyáḥ, on foot. See § 129, 8.

§ 174. δ became σ before a following voiceless dental, as οἶθα : οἶδα; ἔψευσται : ψεύδομαι. See § 110.

th

§ 175. th was a rare sound in the parent language. It was preserved in Sanskrit and Greek, but in prim. Latin it fell together with original dh, and in prim. Keltic,

Germanic and the Baltic-Slavonic languages with original *t*. οἶσθα, Skr. *véttha*, *thou knowest*; πλάθανον, *a platter* or *mould to bake in*, Skr. *prthúh*, *broad*; μόθος, *battle-din*, Skr. *mánthati*, *he twists, shakes*, see § 102.

§ 176. Indg. *sth* became *στ*, as ἵστημι, Skr. *tiṣṭhāmi*, *I stand*; στῦλος, *pillar*, Skr. *stūrāh*, *strong*; superlative suffix -ιστος = Skr. *-iṣṭhaḥ*, see § 102.

dh

§ 177. Indg. *dh* (= Skr. *dh*, Lat. *f* initially, *b* medially before and after *r*, before *l* and after *u* (*w*), in other cases *d*, Keltic and Baltic-Slavonic languages *d*, Germanic *d*, *ḍ*) became voiceless *θ* in Greek, as θήσασθαι, *to suck*, Skr. *dháyanti*, O.Ir. *denait*, *they suck*, Lat. *fēlārē*, Goth. *daddjan*, *to suckle*; θῦμός, *courage, passion*, Skr. *dhūmāh*, Lat. *fūmus*, Lith. pl. *dúmai*, *smoke*; θύρα, OE. *duru*, pl. Lat. *fores*, Lith. *dūrys*, *door*; τίθημι, Skr. *dádhāmi*, *I put, place*, OE. *dæd*, *deed*, Lith. *dėti*, O.Slav. *děti*, *to lay*, cp. Lat. *facio*, *fēcī*; μέθυ, *wine*, Skr. *mádhu*, O.Ir. *mid*, OE. *meðu*, *meodu*, Lith. *medūs*, *mead, honey*; ἐρυθρός, Skr. *rudhirāh*, Lat. *ruber*, OE. *rēad*, *red*; αἶθω, *I burn*, Skr. *édhas*, *fire-wood*, Lat. *aedēs*, *sanctuary*, originally, *fire-place, hearth*, OE. *ād*, *funeral pile*; οὔθαρ, Skr. *ūdhar*, Lat. *über*, OE. *ūder*, *udder*; πείθω, Lat. *fīdo*; imperative κλῦθι = Skr. *śrudhī*, *hear thou*.

§ 178. Indg. *dhj* became *σσ*, *σ*, as μέσσος, μέσος, Skr. *mādhyah*, *middle*, see § 129, 6.

§ 179. Indg. *dh* appears as *σ* before voiceless dentals, as πέπεισται, ἐπίσθην : πείθω, see § 110.

§ 180. On the de-aspiration of *θ*, as in τίθημι, see § 115.

THE PALATALS AND THE VELAR GUTTURALS.

§ 181. In treating the history of these consonants in the various languages it is convenient to divide the Indg. family of languages into two great groups according to the

different development which these sounds underwent in the two groups. The palatal explosives **k**, **kh**, **g** and **gh** usually appear in Greek, Italic (Latin, Oscan, Umbrian), Keltic and the Germanic languages as explosives or as sounds which are directly developed from explosives, whereas in the Aryan, Armenian, Albanian and Baltic-Slavonic languages they usually appear as spirants. The former group is generally called the centum- and the latter the satəm-group of languages, where Latin **centum** and Zend **satəm** represent the original Indg. word **kṛntóm*, *hundred*. This twofold development of the palatals is probably due to dialectal differences which already existed in the Indg. parent language. In addition to the palatals the parent language also had two kinds of velars, viz. pure velars and labialized velars or velars with lip-rounding. The pure velars fell together with the palatals in the centum-languages, but were kept apart in the satəm-languages. On the other hand the pure velars fell together with the labialized velars in the satəm-languages, but were kept apart in the centum-languages.

The following table contains the normal development of the palatals and velar gutturals in the various languages. The labialized velars are here indicated by **w**. In other parts of this grammar the **w** is almost always omitted as being unnecessary, because the Greek words themselves generally indicate whether they originally contained a pure velar or a labialized velar.

| Centum-Languages. | | | | | Satem-Languages. | | |
|-------------------|---------|-----------|-------|-----------------------|------------------|-------|---------|
| Indg. | Gr. | Lat. | O.Ir. | Germanic. | Skr. | Lith. | O.Slav. |
| k | κ | c | c | h; g, ȝ | ś | sz | s |
| g | γ | g | g | k | j | ž | z |
| gh | χ | h, f, g | g | g, ȝ | h | ž | z |
| q | κ | c | c | h; g, ȝ | k, c | k | k, č |
| g | γ | g | g | k | g, j | g | g, ž |
| gh | χ | h, (f), g | g | g, ȝ | gh, h | g | g, ž |
| q ^w | π, τ, κ | qu, c | c | hw, h; ȝw, ȝ, w; f, þ | k, c | k | k, č |
| g ^w | β, δ, γ | v, gu, g | b, g | kw, k | g, j | g | g, ž |
| g ^{wh} | φ, θ, χ | f, v, gu | g | g, ȝw, ȝ, w | gh, h | g | g, ž |

I. THE PALATALS.

k

§ 182. Indg. k (= Lat. O.Ir. c, Germanic h; g, ȝ, Skr. ś, Lith. sz, O.Slav. s) remained in Greek initially and generally also medially, as *ἐκατόν*, Lat. *centum*, O.Ir. *cēt*, OE. *hund*, Skr. *śatám*, Lith. *szim̃tas*, *hundred*; *καρδίᾱ*, *κραδίη*, Lat. *cor*, O.Ir. *cride*, OE. *heorte*, Lith. *szirdis*, *heart*; *κλέπτω*, Lat. *clepo*, Goth. *hlifa*, *I steal*; *κλυτός*, Lat. *in-clutus*, Skr. *śrutáh*, *renowned*, O.Ir. *cloth*, *renown*; *κύων*, Lat. *canis*, O.Ir. *cū*, OE. *hund*, Skr. *śvā*, gen. *śúnaḥ*, Lith. *szũ*, gen. *szuñs*, *dog*, *hound*; *δέκα*, Lat. *decem*, Goth. *taíhun*, Skr. *dáša*, Lith. *dėszimt*, *ten*; *δέδορκε*, Skr. *dadárša*, *he has seen*; *οἶκος*, *φοῖκος*, Skr. *věśáh*, *house*, Lat. *vīcus*, *village*; *ὀκτώ*, Lat. *octō*, OE. *eahta*, Skr. *aṣṭáu*, *aṣṭá*, Lith. *asztũnì*, *eight*; *ὥκός*, Skr. *āśúḥ*, *quick*, Lat. *ōcior*.

§ 183. kw became ππ, as *ἵππος*, Lat. *equus*, OE. *eoh*, Skr. *áśvaḥ*, *horse*. See § 124, 2.

§ 184. Medial kj became ττ in Att. and σσ in Ion., as *ἥττων*, *ἥσσω* : *ἥκιστος*; *πάτταλος*, *πάσσαλος* : root *pāk-. ττ and σσ were simplified to τ, and σ initially, as Att. *τήμερον*, Ion. *σήμερον* from *kjāμερον. See § 129, 7.

§ 185. ks became χ before a liquid or nasal, as *μυχλός* from *μυκσλος, *stallion-ass* : Lat. *mūlus*; *λέχριος* : *λοξός*, Lat. *luxus*; *ἀράχνη* from *ἀρακσνᾱ, Lat. *arānea*; *λάχνη* from *λάκσνᾱ*; *λύχνος* from *λυκσνος : Lat. *lūna* from *louksnā; *πάχνη* from *πακσνᾱ; *πλοχμός* : *πλόκαμος*. See § 218.

§ 186. k disappeared before sk, as *δίσκος* from *δικσκος : *δικεῖν*; *είσκω* from *fefikσκω : *ἔοικα*; *λάσκω* from *λακσκω : *λακεῖν*; *διδάσκω* from *διδακσκω.

§ 187. κ became γ before voiced sounds, as *πλέγδην* : *πλέκω*. See § 107.

g

§ 188. Indg. g (= Lat. O.Ir. g, Germanic k, Skr. j, Lith. ž, O.Slav. z) remained in Greek initially and generally also medially, as γένος, Lat. genus, Goth. kuni, Skr. jánas-, race, generation, O.Ir. gein, birth; γεύομαι, Lat. gusto, I taste, OE. cēosan, to choose, Skr. juṣātē, he tastes; γόνυ, Lat. genu, OE. cnēo, Skr. jānu, knee; γνωτός, Lat. (g)nōtus, O.Ir. gnāth, Skr. jñātāḥ, known, OE. cnāwan, O.Slav. znati, to know; ἀγρός, Lat. ager, Goth. akrs, Skr. ájraḥ, field, acre; ἄγω, Lat. ago, O.Ir. agim, Skr. ájāmi, I drive; ἐγώ, Lat. ego, OE. ic, I; ἔργον, OE. weorc, work; ἀμέλγω, Lat. mulgeo, M.Ir. bligim, OE. meolce, Lith. mēlzu, I milk, Skr. mṛjāti, he wipes, rubs.

§ 189. Medial γν, γμ became ην, ημ, as in γινώσκω, γίγνομαι, συγγνός, ἀγμός. This explains why the guttural nasal came to be expressed by γ in Greek (§ 155). At a later period ην was simplified to ν, as γινώσκω, γίνομαι. The ν occurs on inscriptions in Ion. already in the fifth and in Att. about the end of the fourth century B.C.

§ 190. gj became ζ, as ἄζομαι from *ἄγγομαι, I stand in awe of, Skr. yájatē, he honours; ἀρπάζω from *ἀρπαγγω. See § 129, 8.

§ 191. γ became κ before voiceless consonants, as λέξω, λέλεκται : λέγω. See § 106.

kh

§ 192. kh was one of the rarest sounds in the parent Indg. language. It was generally preserved in Greek, but in prim. Latin it fell together with original gh, and in the prim. Keltic, Germanic and Baltic-Slavonic languages with original k. It is doubtful what simple kh would have become in Sanskrit, because it only occurs in the original combination skh which became ch initially and cch medially.—σχίζω, Lat. scindo, I split, Skr. chinátti from

*skhinátti, *he splits*, OE. scādan, *to divide*; σχάω, *I slit*, Skr. chyáti, *he splits*, see § 102.

gh

§ 193. Indg. gh (= Lat. h medially between vowels and also initially before vowels except u, f initially before u, g before and after consonants, O.Ir. g, Germanic g, ǵ, Skr. h, Lith. ž, O.Slav. z) became voiceless χ in Greek, as χιών, Skr. himáh, *snow*; χειμών, Lat. hiems, O.Ir. gaim, Lith. žemà, O.Slav. zima, *winter*, Skr. hēman, *in winter*; χαμαί, *on the ground*, Lat. humus, Lith. žemė, O.Slav. zemlja, *earth, ground*; χέ(φ)ω, Lat. fundo, OE. gēote, *I pour*, Skr. hutáh, *poured, sacrificed*; χήν, Lat. (h)anser, OE. gōs, Skr. haśáh, *goose*; λείχω, Lat. lingo, O.Ir. ligim, Skr. réhmi, léhmi, Lith. lėžiù, O.Slav. liza, *I lick*; Pamph. féχω, Lat. veho, OE. wege, Skr. váhāmi, Lith. vezù, O.Slav. veza, *I bear, carry, move*; ἄγχω, Lat. angō, *I press tight*, Skr. āhas-, *need, distress*, OE. enge, *narrow*; πῆχυς, *fore-arm*, Skr. bāhúh, *arm*.

§ 194. ghj became ττ in Att. and σσ in Ion., as Att. θάττων, Ion. θάσσω : ταχύς, τάχιστος. See § 129, 7.

2. THE PURE VELARS.

q

§ 195. Indg. q (= Lat. O.Ir. c, Germanic h; g, ǵ, Skr. k but c before i, and a = Indg. e, Lith. k, O.Slav. k but č before palatal vowels) became κ in Greek initially and generally also medially, as καρκίνος, Lat. cancer, Skr. karkaṭah, *crab*; κάλυξ, Skr. kalikā, *flower-bud*; καρπός, *fruit*, Lat. carpo, *I pluck, pick*, OE. hærfest, *autumn*, Skr. kṛpāṇah, *sword*, Lith. kerpù, *I shear*; καλέω, Lat. calo, *I call, call out*, Lith. kalbà, *speech*; καλός, Skr. kalyāṇah, *beautiful*; κελαινός, Skr. kālah, *black*, cp. Lat. cāligo; κέλλω, *I drive*, Skr. kāláyati, *he drives*, Lat. celer, *quick*; κολωνός, Lat. collis, *hill*, Lith. kálnas,

mountain; κρέας, *flesh*, OE. hrā(w), *corpse, carrion*, Skr. kraviṣ-, *raw meat*, Lat. cruor, O.Ir. crū, Lith. kraūjas, *blood, gore*; ἀγκών, *ankos*, O.Lat. ancus, Skr. āṅkas-, *bend, hollow*, Lith. anka, *loop, knot*; ζευκτός, Lat. jūctus, Skr. yuktāḥ, Lith. jūktas, *yoked*; μείραξ, Skr. maryakāḥ, *boy, young man*.

§ 196. qj became ττ in Att. and σσ in Ion., as Att. πλήττω, Ion. πλήσσω, root *plāq-. See § 129, 7.

g

§ 197. Indg. g (= Lat. O.Ir. g, Germanic k, Skr. g but j before i, and a = Indg. e, Lith. g, O.Slav. g but ž before palatal vowels) became γ in Greek initially and generally also medially, as γέρανός, Lat. grūs, OE. cran, Lith. gėrvė, *crane*; ἄγος, *guilt*, Skr. āgas-, *offence, crime, sin*; ἀγορά, *assembly*, ἀγείρω, *I assemble*, Lat. grex, *herd, flock*, O.Ir. graig, *herd of horses*, Skr. grāmaḥ, *crowd*; ζυγόν, Lat. jugum, Goth. juk, Skr. yugām, O.Slav. igo, *yoke*; στέγος, τέγος, OE. þæc, Lith. stogas, *roof*, O.Ir. teg, *house*; στέγω, Lat. tego, *I cover*, Skr. sthāgati, sthagayati, *he hides, conceals*.

§ 198. gj became ζ, as στίζω from *στίγιω : στίγμα, cp. Skr. tigmaḥ, *pointed, sharp*, Lat. in-stigo. See § 129, 8.

§ 199. γ became κ before voiceless consonants, as στέγω : αὐξέω, αὐξάνω : Lat. augeo, Goth. áuka, Lith. áugu, *I grow, increase, add*. See § 106.

qh

§ 200. qh was of rare occurrence in the parent language. It became χ in Greek, kh but ch before i and a = Indg. e in Sanskrit; in prim. Lat. it fell together with original gh, qh, in prim. Keltic and Germanic with original k, q, in Lith. and O.Slav. with original q. καχάζω, *I laugh*, Skr. kakhati, *he laughs*; κόγχος, Lat. congius (a small liquid measure), Skr. śaṅkhāḥ, *muscle*, see § 102.

gh

§ 201. Indg. gh (= Skr. gh but h before i, and a = Indg. e, Lat. h initially before and medially between vowels, g before and after consonants, O.Ir. g, Germanic g, ȝ, Lith. g, O.Slav. g but ž before palatal vowels) became voiceless χ in Greek, as χαλκός, *brass*, Lith. geležis, *iron*; χανδάνω, *I lay hold of*, Lat. pre-hendo, *I seize*, Goth. bi-gita, *I find*, O.Slav. gadaja, *I guess, divine*; δολιχός, Lat. longus, OE. lang, Skr. dīrgháh, *long*; λέχος, O.Ir. lige, *bed*, Goth. ligan, O.Slav. ležati, *to lie down*; ὀμίχλη, Lith. miglà, *fog, mist*, Skr. mēgháh, *cloud*; στείχω, O.Ir. tiagu, *I go*, OE. stige, *I rise*, O.Slav. stignā, *I come*.

3. THE LABIALIZED VELARS.

qʷ

§ 202. Indg. qʷ (= Lat. qu before vowels except u, but c before u and consonants, O.Ir. c, Germanic hw, h; ȝw, ȝ, w; f, ƿ (§ 181), Skr. k but c before i, and a = Indg. e, Lith. k, O.Slav. k but č before palatal vowels) had a threefold development in Greek. It became π before all sounds except ι, ε, υ and j; τ before ι and ε; κ before and after υ, as πό-θεν, whence, Lat. quis, O.Ir. cīa, OE. hwā, Skr. káh, Lith. kàs, *who?*; πρότερος, OE. hwæper, Skr. kataráh, *which of two?*; πρίασθαι, *to buy*, Skr. kriṇāmi, *I buy*; ποινή: τίσις, *penalty*, Skr. cáyatē, *he avenges, punishes*; πάλαι, *long ago, formerly*, Skr. caramáh, *the last*; λείπω, Lat. linquo, O.Ir. lēcim, Lith. lėkù, *I leave*, Skr. riṇákti, *he leaves*, Goth. leiþvan, *to lend*; ἔπομαι, Lat. sequor, Lith. sekù, *I follow*, Skr. sácātē, *he follows*; ἡπαρ, Lat. jecur, Skr. yákr̥t, Lith. pl. jeknos, *liver*; πεπτός, Lat. coctus, Skr. paktáh, *cooked*.

τίς, τί, Lat. quis, quid, Oscan pis, pid, Skr. indef. pronoun cid; Hom. τέο, Goth. hvis, O.Slav. česo, *whose?*; τέτταρες, τέσσαρες, Lat. quattuor, O.Ir. cethir, Goth.

fidwōr, Skr. catvārah, Lith. keturi, *four*; τε, Lat. -que, Skr. ca, *and*; τέλος : πάλαι; τίσις : ποιμή; πέντε, Lat. quinque, O.Ir. cōic, Goth. fimf, Skr. páñca, Lith. penki, *five*.

λύκος, Goth. wulfs, Skr. vṛkaḥ, *wolf*; νύξ, νυκτός, Lat. nox, noctis, Goth. nahts, Skr. nákti-, Lith. naktis, *night*; κύκλος, OE. hwēol, Skr. cakráh, *wheel*; θαλυκρός : θάλλπος.

NOTE.—1. Forms derived from the pronominal stem q^wo- have κ instead of π, especially in the Ionic dialect of Herodotus and Herondas, as κόσος, κότερος, κοῦ, κοῖος, κῶς, ὄ-κως, but only the regular forms with π are found on Ion. inscriptions; in Thess. κίς also occurs beside τίς. It is difficult to account for the κ-forms unless we may suppose that they first arose in combination with the negative particle, as in οὔκως, οὔκις, where the original velar would regularly become κ because of the preceding υ. In like manner may also be explained πολλάκις a new formation for older *πολύκις.

2. In the Aeolic dialects π occurs beside τ before palatal vowels, as Lesb. πέσσυρες, Hom. πίσυρες, Boeot. πέτταρες, beside Att. τέτταρες; Lesb. Thess. πέμπτε beside πέντε; Thess. πείσαι beside Att. τεῖσαι.

3. Forms like λείπεις, λείπει, λείπετε were due to levelling out the regular π-forms λείπω, λείπομεν, λείπουνσι; and similarly gen. ἔπεος for *ἔτεος, with π from ἔπος.

§ 203. q^wj became ττ, σσ, as Att. πέττω, Ion. πέσσω : πέψω, πεπτός, Lat. coquo, O.Slav. peka, *I cook, bake*, Skr. pácati, *he cooks*. See § 129, 7.

§ 204. πμ became μμ, as λέλειμμαι : λείπω; ὄμμα from *ὄπμα, cp. Lat. oculus, Lith. akis, *eye*. See § 117.

g^w

§ 205. Indg. g^w (= Lat. v but gu after n, and g when the labialized element had been lost, O.Ir. b but g before old j, Germanic kw, k, Skr. g but j before i, and a = Indg. e, Lith. g, O.Slav. g but ž before palatal vowels) had

a threefold development in Greek. It became β before all sounds except ϵ , υ and j ; δ before ϵ ; γ before and after υ , as $\beta\alpha\lambda\acute{\iota}\nu\omega$, *I go*, Lat. *venio*, Goth. *qima*, *I come*, Skr. *gámati*, *he goes*, *ja-gáma*, *he has gone*; $\beta\acute{\alpha}\lambda\alpha\nu\omicron\varsigma$, Lat. *glans*, Lith. *gīlė*, *acorn*; $\beta\acute{\alpha}\lambda\lambda\omega$, *I throw*, Skr. *gálati*, *he trickles down*; Boeot. $\beta\alpha\nu\acute{\alpha}$, O.Ir. *ben*, Goth. *qinō*, OE. *cwene*, O.Slav. *žena*, *woman*, Skr. *gnā*, *wife of a god*; $\beta\alpha\rho\acute{\upsilon}\varsigma$, Lat. *gravis*, Goth. *kaúrus*, Skr. *gurúh*, *heavy*; $\beta\omicron\upsilon\varsigma$, Skr. *gāuh*, *ox*, O.Ir. *bō*, OE. *cū*, *cow*, Lat. *bōs* for **vōs* is an Umbrian-Samnitic loanword; Att. $\beta\omicron\upsilon\lambda\epsilon\tau\alpha\iota$: Dor. $\delta\acute{\eta}\lambda\epsilon\tau\alpha\iota$; $\epsilon\rho\epsilon\beta\omicron\varsigma$, Goth. *riqis*, Skr. *rájas*, *darkness*; $\epsilon\beta\eta\nu$, $\epsilon\beta\tilde{\alpha}\nu$, *I went*, Skr. *ágāt*, *he went*; $\tau\acute{\alpha}\rho\beta\omicron\varsigma$, *fright*, Lat. *torvos*, *fierce, grim*, Skr. *tárjati*, *he threatens*; $\phi\acute{\epsilon}\beta\omicron\mu\alpha\iota$, *I flee from*, Lith. *bėgu*, *I flee, run*.

$\delta\epsilon\lambda\phi\acute{\upsilon}\varsigma$, Skr. *gárbhah*, *matrix*; $\acute{\alpha}\delta\acute{\eta}\nu$, *gland*, Lat. *inguen*, *groin*; Dor. $\delta\acute{\eta}\lambda\epsilon\tau\alpha\iota$: Att. $\beta\omicron\upsilon\lambda\epsilon\tau\alpha\iota$.

In a few words β occurs before ι where we should regularly expect δ , as $\beta\acute{\iota}\tilde{\alpha}$, *bodily strength, force, might*, Skr. *jyá*, *jyá*, *supreme power, upper hand*; $\beta\acute{\iota}\omicron\varsigma$, *life*, Lat. *vīvos*, O.Ir. *bīu*, Goth. *qius*, Skr. *jīvāh*, *alive*; $\beta\acute{\iota}\omicron\varsigma$, *bow*, Skr. *jyá*, *bow-string*. These forms have never been satisfactorily explained. Some scholars assume that $g^w\iota$ regularly became $\beta\iota$ and that $\delta\iota\epsilon\rho\acute{\omicron}\varsigma$ is not etymologically connected with Skr. *jirāh*.

$\gamma\upsilon\nu\acute{\eta}$: Boeot. $\beta\alpha\nu\acute{\alpha}$; $\phi\epsilon\acute{\upsilon}\gamma\omega$, $\epsilon\phi\upsilon\gamma\omicron\nu$: $\phi\acute{\epsilon}\beta\omicron\mu\alpha\iota$; gen. $\omicron\acute{\iota}\nu\acute{\omicron}-\phi\lambda\upsilon\gamma\omicron\varsigma$: gen. $\phi\lambda\epsilon\beta\acute{\omicron}\varsigma$; $\acute{\upsilon}-\gamma\iota\acute{\eta}\varsigma$, *sound, healthy*, lit. *well living*: $\beta\acute{\iota}\omicron\varsigma$.

NOTE.—1. In the Aeolic dialects β occurs beside δ before palatal vowels, as Lesb. $\beta\acute{\epsilon}\lambda\phi\acute{\iota}\nu$, Boeot. $\beta\acute{\epsilon}\lambda\phi\acute{\iota}\nu$: Att. $\delta\epsilon\lambda\phi\acute{\iota}\nu$; Boeot. $\beta\epsilon\acute{\iota}\lambda\omicron\mu\epsilon\nu\omicron\varsigma$, Thess. $\beta\acute{\epsilon}\lambda\lambda\epsilon\tau\alpha\iota$: Dor. $\delta\acute{\eta}\lambda\epsilon\tau\alpha\iota$, Att. $\beta\omicron\upsilon\lambda\epsilon\tau\alpha\iota$.

2. Forms like $\phi\omicron\beta\acute{\epsilon}\omega$, $\phi\omicron\beta\acute{\epsilon}\omicron\mu\alpha\iota$ were new formations after the analogy of $\phi\acute{\epsilon}\beta\omicron\mu\alpha\iota$; and similarly gen. $\epsilon\rho\acute{\epsilon}\beta\epsilon\omicron\varsigma$ for $*\epsilon\rho\acute{\epsilon}\delta\epsilon\omicron\varsigma$, with β from $\epsilon\rho\epsilon\beta\omicron\varsigma$.

§ 206. $g^w j$ became ζ , as $\nu\acute{\iota}\zeta\epsilon\iota$, O.Ir. *nigid*, *he washes*,

Skr. *nij-*, *wash*; *λάζομαι* : *λαμβάνω*, *λαβεῖν*; *ζῆν* : *βιᾶναι*, *βίος*. See § 129, 8.

§ 207. *βν* became *μν*, as *ἀμνός* from **ἀβνός*, Lat. *agnus*; *σεμνός* : *σέβομαι*; *ἐρεμνός* : *ἐρεβος*. See § 117.

q^wh

§ 208. q^wh was a rare sound in the parent language. In Skr. it fell together with original *qh*, in Lat. and Gr. with *g^wh*, in Keltic and Germanic with *q^w*, in Lith. and O.Slav. with *q*, *q^w*. *φάλλη*, OE. *hwæl*, *whale*; *σφάλλομαι*, *I stumble*, Skr. *skhalatē*, *he stumbles*. See § 102.

g^wh

§ 209. Indg. g^wh (= Lat. *f* initially, *v* medially except that after *n* it became *gu*, O.Ir. *g*, Germanic *g^w*, *g*, *w*, Skr. *gh* but *h* before *i*, and *a* = Indg. *e*, Lith. *g*, O.Slav. *g* but *ž* before palatal vowels) had a threefold development in Greek. It became *φ* before all sounds except *ε*, *υ* and *ι*; *θ* before *ε*; *χ* before and after *υ*, as *φάτος*, Skr. *hatáh* for **ghatáh*, *killed, slain* : *φόνος*, *θείνω*; *φαιδρός*, *beaming, radiant*, Lith. *gaidrūs*, *serene, clear*; *ἐλαφρός* : *ἐλαχός*; *ἀλφή* older **ἀλφά*, *produce, gain*, Lith. *algà*, *pay, reward*; *ὀσ-φραίνομαι*, *I smell*, Skr. *ghrāti*, *he smells*; acc. *νίφα*, Lat. *nivem*, nom. Lith. *snėgas*, Goth. *snáíws*, OE. *snāw*, *snow*; *νείφει*, *νίφει* with *φ* for *θ* from forms like *νίφω*, *νιφόμενος*, Lat. *ninguit*, Lith. *snįga*, *it snows*, O.Ir. *snigid*, *it rains*; *ὄφις*, Skr. *áhiḥ*, Lith. *angis*, Lat. *anguis*, *snake, serpent*.

θερμός, Lat. *formus*, OE. *wearm*, *warm*, Skr. *gharmáh*, *glow, heat*, O.Ir. *guirim*, *I heat*, O.Slav. *gorěti*, *to burn*; *θείνω*, Lat. *of-fendo*, *I strike*, O.Ir. *gonim*, *I wound, kill*, Skr. *hánti*, *he strikes, slays*, *ghnánti*, *they strike*.

ἐλαχός, *small, little*, Skr. *laghúh*, *light, quick* : *ἐλαφρός*; *εὔχομαι*, *I pray*, Skr. *vāghát-*, *institutor of a sacrifice*;

δνυξ, δνυχος, Lat. *unguis*, O.Ir. *ingen*, Lith. *nāgas*, *claw*, *nail*.

§ 210. g^{whj} became ττ, σσ, as ἐλάττων, ἐλάσσων : ἐλαχύς. See § 129, 7.

THE SPIRANTS.

§ 211. The Indg. parent language had at least the two spirants *s* and *z*. *s* occurred both initially, medially and finally. *z* only occurred in combination with a following media or media aspirata. In those languages where the mediae and mediae aspiratae became voiceless the *z* also became voiceless at the same time, as Goth. *asts* beside ὄζος, Indg. **ozdos*, *branch*, *twig*; μισθός beside Goth. *mizdō*, O.Slav. *mǐzda*, *pay*, *reward*. See §§ 224-6.

s

§ 212. Indg. *s* remained in the oldest Greek in the following cases:—

1. In combination with voiceless explosives, as σπαίρω, *I struggle convulsively*, Lith. *spiriù*, *I push with the foot*; Lat. *spernere*, *to despise*, OE. *spornan*, *spurnan*, *to kick*; ἑσπερος, Lat. *vesper*; στατός, Lat. *status*; ἐστί, Skr. *ásti*, Lat. *est*, Goth. *ist*, Lith. *ěsti*, *is*; σκότος, *darkness*, *gloom*, Goth. *skadus*, OE. *sceadu*, *shade*, *shadow*; γιγνώσκω, Lat. *nōsco*; σφάλλομαι, *I stumble*, Skr. *skhalatē*, *he stumbles*; σχίζω, Lat. *scindo*; λείψω, γράψω : λείβω, γράφω; ἄξων, Lat. *axis*; λέγω : λέγω. But τσ became σσ, σ, as Hom. ποσσί, Att. ποσί beside Skr. *patsú*, see § 166.

NOTE.—Forms like τέγος, OE. *þæc*, *roof*, O.Ir. *teg*, *house*, beside στέγος, Lith. *stógas*, *roof*, probably existed already in the parent language, see § 112.

2. Intervocalic σσ became simplified to σ in Attic, as aor. Hom. ζέσσα, Att. ζέσα : ζέω, Skr. *yásāmi*, *I seethe*, *bubble*; Hom. ἐτέλεσσα, Att. ἐτέλεσα : τελέω from *τελέσσω; Hom.

ἔπεσι, ἔπεσι, Att. ἔπεσι = Skr. *vácassu*. But before and after consonants σσ became simplified to σ in all the dialects, as δύστηνος from *δύσ-στᾶνος; loc. pl. Att. μῆσί, Cret. μῆνσί from *μῆνσ-σι; late Gr. aor. τέρσασθαι from *τέρσσασθαι : τέρσομαι.

3. In combination with a preceding liquid (see however § 217), as τέλσον : τέλος; κέλσω, ἔκελσα : κέλλω; Hom. θάρσος, Lesb. θέρσος; Hom. ἄρσην, Ion. ἔρσην; Ion. κόρση. This ρσ became ρρ in Att., as θάρρος, ἄρρην, κόρρην.

4. Finally, as λύκος, Lat. *lupus*, Goth. *wulfs*, *wolf*; ἡδιστος, Goth. *sutists*, *sweetest*; τίς, Lat. *quis*; φέροις, Goth. *baíráis*, *thou mayest bear*.

§ 213. s became h in prim. Greek initially before vowels and medially between vowels, and then in the latter case the h disappeared altogether.

1. Initially: ἄλλομαι, Lat. *salio*; ἄλς, Lat. *sāl*, OE. *sealt*, *salt*; ἔδος, Skr. *sádas*-, Lat. *sēdes*, *seat*; ἔνος, Skr. *sánaḥ*, Lat. *sen-ex*, Goth. *sin-eigs*, Lith. *sēnas*, *old*; ἔρπω, Skr. *sárpāmi*, Lat. *serpo*, *I creep*; ἐπτά, Skr. *saptá*, Lat. *septem*, O.Ir. *secht*, Goth. *sibun*, Lith. *septyni*, *seven*; ἔπεται, Skr. *sácatē*, Lat. *sequitur*, *he follows*; ἡμι-, Skr. *sāmi*, Lat. *sēmi*-, *half*; ὅ, Skr. *sá*, Goth. *sa*, *the*; it is difficult to account for σῦς beside ὕς, Lat. *sūs*, OE. *sū*, *sow*, *pig*.

Initial h- disappeared in the prehistoric period of Greek when the next syllable or the next but one began with an aspirate, as ἔχω : ἔξω, σχήσω; ἴσχω from *ἰσχω older *σίσχω; αὔος from *αὐῆος older *havhos, Lith. *saūsas*, *dry*; ἔδεθλον, *bottom* : ἔδος, Skr. *sádas*-, *seat*; ἀμόθεν : ἀμῶς. See § 115.

NOTE.—In the prehistoric period of some of the Doric dialects and in the Lesb., Elean and Asiatic-Ionic dialects the spiritus asper became the spiritus lenis.

2. Medially (= Lat. *r*, Goth. *z* but *r* in the other Germanic languages): Aeol. αῦως, Ion. ῥῶς, Att. ῥως, from *āūsōs, Lat. *aurōra*; gen. γένεος = Skr. *jānasaḥ*, Lat. *generis*; Hom. ῥα, Skr. *āsam*, *I was*; ῥδίων from *σφᾶδίσων, Goth. *sutiza*, OE. *swētra*, *sweeter*; ῥός, Lat. *vīrus*; gen. μός, Lat. *mūris*; νέομαι, *I come*, Skr. *nāsātē*, *he joins*; οὔατ, Lat. *auris*, OE. *ēare*, *ear*; gen. pl. fem. Hom. τᾶων, Skr. *tāsam*, Lat. *is-tārum*, Goth. *þizō*, masc. Goth. *þizē*, OE. *þāra*, *of the*; φέρεαι, φέρη = Skr. *bhārasē*, Goth. *baíraza*.

See § 129, 9 for initial and medial *sj*; and § 124, 5 for initial and medial *sw*.

§ 214. Initial *sm*, *sn* became *μ*, *ν* through the intermediate stage of *μμ*, *νν*, as μειδάω, *I smile*, Skr. *smáyātē*, *he smiles*: Hom. φιλο-μειδής; μείρομαι, *I receive as my due*, Skr. *smárati*, *he remembers*: Hom. ἔμμορε; μέλδω, OHG. *smilzu*, *I melt*; μία from *σμία: ἔν, Lat. *sem-el*; νέω, *I spin*, O.Ir. *snāthe*, *thread*: Hom. ἔννεον; acc. νίφα, Lat. *nivem*, nom. OE. *snāw*, Lith. *snėgas*, *snow*: ἀγά-ννιφος; νόος, *mind*, OE. *snot(t)or*, *prudent, wise*; ννός, Skr. *snuṣā*, Lat. *nurus*, OE. *snoru*, *daughter-in-law*. It is difficult to account for the *σμ*- in σμερδαλέος, σμερδνός, *terrible*, OE. *smeortan*, *to smart*; σμίλη, *knife for cutting or carving*, OE. *smiþ*, *smith, carpenter*; σμῖκρός beside μῖκρός; σμύχω, *I burn in a smouldering fire*, OE. *smēocan*, *to smoke*.

Medial *sm*, *sn* became *μμ*, *νν*, which remained in Lesb. and Thess., but became *μ*, *ν* with lengthening of the preceding vowel in the other dialects, as Lesb. Thess. ἐμμί, Att. Ion. εἰμί, Dor. ῥμί, Skr. *āsmi*, Lith. *esmi*, *I am*; Att. ἦμεν, Skr. *āsma*, *we were*; Lesb. ἄμμες, Att. Ion. ἡμείς, Dor. Boeot. ἄμές, Skr. *asmá*, *we*; Lesb. σελάννᾱ, Att. σελήνη, from *σελάσνᾱ; Lesb. φάεννος, Ion. φαεινός, Att. φᾶνός, from *φαφεισνός; Ion. εἵνυμι from *φεσνυμι.

§ 215. Initial *sr*, *sl* became *ρ*, *λ* through the intermediate stage of *pp*, *λλ*, as ῥεῖ, Skr. *srávati*, *he flows*: Hom. ῥρεον;

ροφέω, Lith. *srebiù*, *I gulp down*; λείβω, Lat. *libo*, *I pour out*, OHG. *slifan*, *to slide, glide*: Hom. ὄφρα λλείψαντε; λήγω, *I cease*, NE. *slack*: Hom. ἄ-λληκτος.

Medial *sr*, *sl* became *pp*, *λλ*, which remained in Lesb. after short vowels, but became *p*, *λ* with lengthening of the preceding vowel in the other dialects, as Hom. *τρήρων* from **τράσρων*: *τρέ(σ)ω*; *ναύκρᾱρος* from **ναύκρασρος*; Lesb. *χέλλιοι*, Att. Ion. *χέλιοι*, Skr. *sa-hásram*, *thousand*; Lesb. *ἱλλας*, Att. *ἱλαος*, from **σισλαφος*.

Medial *sr*, *sl* became *p*, *λ* after long vowels and diphthongs already in prim. Greek, as *αὔριον* from **αὔσριον*, *to-morrow*, Skr. *usráh*, *matutinal*; *σειρός* from **σεισρός*: *σέσεισμαι*; *θραυλός* from **θραυσλός*: *θραυστός*.

§ 216. Antevocalic *ms*, *ns* became *μμ*, *νν*, which remained in Lesbian and Thessalian, but became *μ*, *ν* with lengthening of the preceding vowel in the other dialects, as Lesb. *ἐνεμμα*, Att. Ion. *ἐνειμα*, Dor. *ἐνημα*: *νέμω*; *ῶμος* from **ῶμσος*, Lat. *umerus*, Goth. *ams*, *shoulder*; *ἐγγημα* from **ἐγάμσα*: *γαμέω*. Gen. Lesb. *μῆννος*, Thess. *μειννός*, Dor. Att. Ion. *μηνός*, Lat. *mēnsis*; gen. *χηνός*: Lat. *anser*, German *gans*, *goose*; Lesb. *ἐμειννα*, Att. Ion. *ἐμεινα*, Dor. *ἐμμηνα*: *μένω*; *ἐφηνα*, *ἐφᾱνα* from **ἐφανσα*: *φαίνω*; and similarly *ἐκτεινα*, *ἐτεινα*, *ἐθεινα*, *ὔφηνα*, *ἐκέρδᾱνα*, Ion. *ἐκέρδηνα*, *ἐξήρᾱνα*, *ὠνόμμηνα*.

§ 217. Antevocalic *ls*, *rs*. It is doubtful what is the regular development of these combinations in Greek. Some scholars assume that they regularly remained in prim. Greek when immediately preceded by the accent and that *rs* then became *pp* in Attic, but that in other cases they had the same development as antevocalic *ms*, *ns* (§ 216). Other scholars assume that *ls*, *rs* regularly remained except that the latter combination became *pp* in Attic, and that aorists like *ἐπηλα*: *πάλλω*, *ἐσφηλα*: *σφάλλω*, *ἐστειλα*: *στέλλω*, *ἤγγειλα*: *ἀγγέλλω*, *ἐτίλα*: *τίλλω*, *ἐδεира*: *δέρω*, *ἐφθειра*: *φθείρω*, *ἐσῦра*: *σύρω* were new formations

after the analogy of *ἐνείμα* : *νέμω*, *ἔμεινα* : *μένω*, &c. *ἐκέλσα* : *κέλλω*, *ἔκερσα* : *κείρω*, *ᾠρσα* : *ὄρνυμι* ; Hom. *θάρσος*, Lesb. *θήρσος*, Att. *θάρρος* ; *θαρσέω*, Att. *θαρρέω* ; Hom. *ἄρσην*, Ion. Cret. *ἔρσην*, Att. *ἄρρην* ; *κόρση*, Att. *κόρρη* : *κουρεύς*, *οὐρά* : Att. *ὄρρος*. See however § 212, 3.

§ 218. *s* between a tenuis and a following liquid or nasal became *h* and then combined with the preceding tenuis to form a tenuis aspirata, as *στιφρός* from **στιπσρός* : *στιβαρός* ; *λύχνος* from **λυκσνος* : Lat. *lūna* from **louksnā*. For further examples see § 185.

§ 219. When intervocalic *-h-* from *-σ-* belonged to the second vowel it became transposed so as to stand in front of the first vowel, as Hom. *εὔω*, Lat. *ūro*, *I burn, singe*, Skr. *ōṣati*, *he burns* ; Hom. Att. *ιέρως*, Dor. Boeot. Thess. *ιαρός*, *holy*, Skr. *iṣirāh*, *swift, active, strong* ; *εἰπόμεν* from **ἐηεπόμεν* : *ἔπομαι*, Lat. *sequor*. But if the first vowel was preceded by a tenuis the tenuis became tenuis aspirata, as *φροῦδος* from **προ-ηοδος* ; *φρουρά*, Ion. *φρουρή* from **προ-ηορά*.

§ 220. When a tenuis came to stand before *h*, it combined with the *h* to form a tenuis aspirata, as *καθίζω* : *ἵζω* ; *ἐφίστημι* : *ἴστημι* ; and similarly in *ἀφίημι* : *ἵημι* ; *ἐφιππος*, *τέθριππον* : *ἵππος*.

§ 221. Interconsonantal *s* disappeared when the first consonant was not a nasal and the last consonant was not *w* or *j*, but in the combination *ksk* the first consonant disappeared (§ 186), as *ἄλτο*, *ἄλμενος* : *ἄλλομαι*, *πάλτο* : *ἐπῆλα*, *ἔσταλτο* : *στέλλω*, *ἄρμενος* : *ἦρσα*, *ᾠρτο* : *ᾠρσα*, *πτέρνα* from **πτέρσνα* ; Hom. *λέκτο* : *ἐλεξα*, and similarly *δέκτο*, *ἔμικτο*, *κατέπηκτο* ; *ἔκτος* : *ἔξ*, *ἐκτείνω*, *ἐκφέρω* from **ἐκστείνω*, **ἐκσφέρω* ; *γεγράφθαι* from **γεγράψθαι* : *γράφω*, and similarly *δέχθαι*, *πεπλέχθαι*, *λελεῖφθαι*, *τετράφθαι*, *τετρίφθαι*.

§ 222. The prepositional forms *ἐξ*, *ἐκ*, *ἐς* (Boeot. and Thessal.) were due to sandhi relations. *ἐξ* regularly

occurred before a following vowel, *ék* before consonants (except *κ*), and *és* before *κ* (§ 186).

§ 223. *tsn* became *nn* through the intermediate stage *zn*, as *βλέννος* from **βλετσνος*, *mucous matter*, Skr. *mṛtsnā*, *clay*; *δέννος* from **δετσνος*, see § 117.

z

§ 224. Indg. *z* (generally written *σ* before *β*, *γ*) remained before voiced mediae, but before voiced aspiratae it became voiceless at the same time the voiced aspiratae became voiceless (§ 103), as *ἴζω* from **sizdō*, Lat. *sīdo*; *ῥζος*, Lesb. *ῥσδος*, Goth. *asts*, from **ozdos*, *branch, twig*; *μίσγω* from **mizgō*, *I mix*, Lith. *mazgōti*, *to wash*; and similarly *πρέσβυς*, *σβέννυμι*. *μισθός* from **mizdhos*, Goth. *mizdō*, *pay, reward*; *ἴσθι*, Zend *zdi* from **zdhi*, *be thou*; *μόσχος* from **mozghos*, Lith. *māzgas*, *sprout, bud*; *ἔσχον* from **ezghom*.

sh, zh

§ 225. The spirants *sh*, *zh* only occurred in combination with *tenues* and *mediae* and arose in prim. Indo-Germanic from the combinations *tenues aspiratae* and *mediae aspiratae* + *s*, as *tsh*, *psh*, *ksh*, *qsh*; *dzh*, *bzh*, *gzh*, *qzh* from older *ths*, *phs*, *khs*, *qhs*; *dhs*, *bhs*, *ghs*, *ghs*. These combinations had in Greek the same development as the original *tenues* + *s*, cp. fut. *πείσομαι*: *πένθος*, *grief, sorrow*, Lith. *kęsiu*, *I suffer*, prim. Indg. **qent-sh* from **qenths*; *ψάω*, *I rub in pieces*: Skr. *psāti*, *he chews*, prim. Indg. **bzhō* from **bhsō*; *ἕνος*: Lat. *hostis*, prim. Indg. **gzhen*, from **ghsen*.

þ, þh; ð, ðh

§ 226. *þ* and *ð* only occurred after palatals and velars which were originally unaspirated, as *kþ*, *qþ*, *gð*, *gð*. *þh* and *ðh* only occurred after palatals and velars which were originally aspirated, as *kþh*, *qþh*, *gðh*, *gðh* from older

khḥ, qhḥ, ghḍ, ghḍ. In the present state of our knowledge it is impossible to determine how these four spirants were pronounced in the parent language. In Greek they became **t**-sounds, and in Sanskrit, Latin, Germanic and the Baltic-Slavonic languages they became **s**-sounds :—(**kḥ**), *κρίσις* : Skr. *kṣitīḥ*, *abode*; *ἄρκτος* : Skr. *ḥkṣaḥ*, *bear*; *τέκτων* : Skr. *tákṣan-*, *carpenter*; (**qh**), *κτείνω* : Skr. *kṣanóti*, *he wounds, injures*; (**qh**), *φθίνω* : Skr. *kṣināti*, *he destroys*; (**gh**), *χθών* : Skr. *kṣam-*, *earth*.

j

§ 227. It is doubtful whether the parent Indg. language had a spirant **j** beside **i**-consonant (§ 118). The initial **ζ**, which occurs in a few Greek words where the other Indg. languages have **i**-consonant, is probably due to a sound-change which took place in prim. Greek under conditions that have not yet been discovered. Examples are :—*ζεῖα*, *spelt*, Skr. *yávaḥ*, *grain, corn*; *ζέω*, Skr. *yásāmi*, *I seethe*, OHG. *jesan*, *to ferment*; *ζυγόν*, Skr. *yugám*, Lat. *jugum*, Goth. *juk*, *yoke*; *ζύμη*, *leaven*, Skr. *yūṣam*, *broth*, Lat. *jūs*.

CHAPTER VII

SANDHI

§ 228. By sandhi is meant the changes which the initial and final sounds of words undergo when used in a word-group or sentence. The term is borrowed from the Sanskrit grammarians and means *combination*, lit. *putting together*. In dealing with sandhi it is necessary to distinguish between the sounds which begin and end a word-group or sentence and those which occur medially. In the former case the sound-changes are the same as those which take place at the beginning or end of a word when used alone, but in the latter case the changes are subject to the same laws which

obtain for the medial parts of a word. The result of these twofold changes often gives rise to what are called sentence-doublets. At a later period these sentence-doublets not unfrequently come to be used beyond their original sphere and then one of the forms becomes generalized and the other dies out. Greek like all the other Indg. languages has numerous examples of this kind, but for our present purpose two or three examples will suffice. In prim. Indg. *j* alternated with *i* in sandhi. The former was used when the next word began with a vowel and the latter when it began with a consonant, as in *πρός* from **προτj* (§ 167) beside *προτί*, cp. *προσ-έθηκα* like Skr. *práty adhām*, but *προτι-θήσω* like Skr. *prāti dhāsyāmi*. *πρός* then came to be used before consonants and became generalized in Attic, whereas *προτί* survived and *πρός* disappeared in other dialects. Prepositional forms like *άν'*, *άπ'*, *κατ'*, *ύπ'*, regularly arose by elision when the next word began with a vowel, but already in Homer they came to be used before a following consonant and even underwent assimilation with it, as *καββάλλω*, *ύββάλλω* beside *καταβάλλω*, *ύποβάλλω*. The original ending of the acc. plural of *o*-stems was *-ons*. This remained in prim. Greek in pausa and when the next word began with a vowel, but became *-os* when the next word began with a consonant (§ 153). The former became generalized in Att. Ion. mild Dor. *-ous*, Boeot. and severe Dor. *-ws*, Lesb. *-ois*, and the latter in Arcad. and Thess. *-os*, whereas in Cretan the *-ous* and *-os* existed side by side. The nom. singular of *n*-stems originally ended partly in *-ēn*, *-ōn* and partly in *-ē*, *-ō* (§ 29). The former became generalized in Greek, the latter in Sanskrit, Latin and Lithuanian, whereas in prim. Germanic the two forms were preserved side by side. We have already seen in other parts of the Phonology that the sound-laws, which govern the pausa form of a word, vary considerably in the different languages, but

this is infinitely more so in regard to the laws of sandhi. It would therefore be beyond the plan and scope of this grammar to treat the subject from a comparative point of view. The phenomena of sandhi can be conveniently divided into two categories according as they relate to the end or the beginning of a word.

I. FINAL SOUNDS.

§ 229. All vowels and diphthongs remained when absolutely final, as *οἶδα*, *ἄγε*, *λύκε*, *ἐστί*, *πρό*, *δάκρυ*, *μέθυ*, Dor. *τιμά*, Att. Ion. *τιμή*, *δύω*, *φέρω*, *φέρεται*, *λύκοι*, *φερόμενοι*, *αὖ*, *Ζεῦ*, *θεᾶ*, *λύκω*, &c.

The vowels -α, -ε, -ο were elided before a following vowel in prim. Greek, and then after the analogy of these -ι was also elided, as *κατ' ἄλλο*, *ἀπ' αὐτῶν*, *τὰ δ' ἄλλα*, *οὐκ ἐγώ* (*οὐ-κί*), *ἐπ' ἀνθρώπων*, *ἐπ' αὐτοῦ*, *λέγοιμ' ἄν*. This rule then became extended to the final vowel of the first element of compounds, as *δι-έλαβον*, *πέντ-ορος*, *ἀπ-αγωγή*, *ἀπ-αιτέω*, *ἱππ-αγωγός*, *ἐπ-αρωγός*. The ο in *πρό*, *τό* was never elided. The antevocalic forms of prepositions were sometimes used for the anteconsonantal, cp. Hom. *ἄν*, *κάτ*, *πάρ* for *ἀνά*, *κατά*, *παρά*. Elision also took place before a following ' and after the loss of *ϝ*, as *νύχθ' ὄλην* = *νύκτα ὄλην*, *οὐδ' εἶς*, *δ' ἔτος*, *ἀπ' ἔργου*, &c.

Beside elision we also find contraction with a following vowel (crasis). The reason for this twofold treatment is unknown. These contractions originally followed the rules for contraction in medial and final syllables (§§ 79, 80), and then at a later period the product of the contraction was determined by the quality of the initial vowel of the second word, as *τᾶλλα* = *τὰ ἄλλα*, *τᾶγαθά* = *τὰ ἀγαθά*, *τοῦνομα* = *τὸ ὄνομα*, *προὔργου* = *πρὸ ἔργου*, *ἐγῶδα* = *ἐγὼ οἶδα*, *ὦγαθέ* = *ὦ ἀγαθέ*, Ion. Dor. *ὠνήρ* beside Att. *ἀνήρ* = *ὁ ἀνήρ*, and similarly Att. *τᾶνδρός*, *τᾶνδρί*.

Consonantal -ι in the combinations -αι, -οι regularly dis-

appeared in prim. Greek before a following vowel (§ 128), and then the *-α, -ο* was either elided or contracted with the following vowel, as Hom. βούλομ' ἐγώ = βούλομαι ἐγώ, ὅς μ' ἔθελεν = ὅς μοι ἔθελεν; καῶλλως = κα(ι) ἄλλως, καὐτός = κα(ι) αὐτός, κᾶν = κα(ι) ἄν, κᾶπί, Dor. κῆπί = κα(ι) ἐπί, τᾶρα = τοι ἄρα, ἀδελφοί = οἱ ἀδελφοί. At a later period the pausa and anteconsonantal form came to be used before vowels and then the *-ι = -j* was preserved and pronounced as the initial of the following word, as καὶ ἐπί = κα-jeπi, Hom. ἄνδρα μοι ἔννεπε = μῶ jεννεπε.

Simple long vowels were shortened when the next word began with a vowel, hence the metrical rule:—‘vocalis ante vocalem corripitur,’ as Hom. πλάγχθῃ ἐπεὶ Τροίης, Att. αὐτῇ-ί, τουτουῖ-ί, Cret. μέ ἔνδικον = μῇ ἔνδικον, see § 71.

Long diphthongs were shortened in prim. Greek when the next word began with a consonant (cp. § 70), hence *-οι, -αι* beside *-φ, -α* in the dat. singular of *ο-* and *ᾱ-*stems, the former of which became generalized in some dialects, and the latter in others, see §§ 321, 325.

§ 230. All originally final explosives disappeared, as ἔφερε, Skr. ábharat, εἶη, Skr. syát, O.Lat. siet, μέλι: μέλιτος, voc. γέρον, χαρίεν: γέροντος, χαρίεντος. τί, Lat. quid, ἔστω, O.Lat. estōd, τό, Skr. tád, Lat. is-tud, ἄλλο, Lat. aliud, κῆρ, cp. καρδίᾱ, Lat. cord-is, voc. παῖ: παιδός, κρῖ: κρῖθή. voc. γύναι: γυναικός. γάλα: γάλακτος, ἦ from *ἦκτ, *he spoke*, voc. ἄνα: ἄνακτος.

NOTE.—Prepositional forms like ἀπ', ὑπ', κατ' regularly preserved their final consonant after the apocope of the vowel or else became assimilated to the following consonant (§ 228), and similarly with the negative οὐκ, οὐχ (before a rough breathing).

Indg. final *-m* became *-n* in prim. Greek and thus fell together with original *-n*, as ἔφερον, Skr. ábharam, εἶην, Skr. syám, O.Lat. siem, τόν, Skr. tam, Lat. is-tum, λύκον, Skr. vḥkam, Lat. lupum, πατρῶν, Skr. pitṛṇām; on ἔν,

χθών, χιών, see § 141. Original *-n* and the *-n* from older *-m* became *-μ* before labials, *-γ* (= *-η*) before gutturals, and completely assimilated to a following liquid, nasal or *σ*-, although the *-ν* was often retained in writing, as ἐμπίπτω, τῆμ πόλιν, ἐμβάλλω, συμβαίνω, ἐμφέρω; ἔγκυκλος, ἐγγενής, συγχέω; ἐλλείπω, σύλλογος, τὸν λόγον; συρρέω; ἐμμένω; σύσσωμος. On the so-called *ν* ἐφελευστικόν, see §§ 306, 316.

In prim. Indg. *-s* alternated with *-z*. The former occurred in pausa and before voiceless explosives, and the latter before voiced explosives. The *-z* was probably preserved in Greek before voiced mediae, although it was not indicated in writing. On forms with and without final *-s*, as in ἀμφίς, πολλάκις, οὕτως beside ἀμφί, πολλάκι, οὕτω, see § 575.

Tenues became aspirates before a rough breathing, as ἀφ' οὐ = ἀπ' οὐ, νύχθ' ὅλην = νύκτ' ὅλην, ἀφίημι = ἀπιήμι, καθαιρέω = κατ-αίρέω. *-δ* + rough breathing became *θ*, as οὐθείς, οὐθέν = οὐδ' εἶς, οὐδ' ἔν.

2. INITIAL SOUNDS.

§ 231. On the contraction which took place when one word ended in a vowel and the following word began with a vowel, see § 229. On the development of prothetic vowels, as in ἔρεβος, ἐρυθρός : Skr. rájah, rudhiráh, see § 77.

§ 232. Forms like ξύν : σύν, ξύλινος : σύλινος, ψελλίζω : σελλίζω are probably sentence-doublings, but the conditions under which they arose are unknown.

Geminated consonants, which arose from assimilation, were preserved in prim. Greek, but became mostly simplified already in the prehistoric period of the language when the words containing them were used alone or began the sentence, as ρεῖ, Skr. srávati, beside ἔρρει, Skr. á-sravat, ῥήγνυμι : ἔρρηξα, ἄρρηκτος, μέιρομαι : ἔμμορε,

λήγω : ἄλληκτος, μειδῆσαι : φιλο-μμειδής, νίφα : ἀγάννιφος, φός (*phós*) : Hom. πατέρι φφῶ, Hom. σεῦε : ἔ-σσευε, σάκος : φερε-σσακής, Boeot. τὰ πᾶματα : πᾶμα.

On forms like ἀφίημι = ἀπ-ίημι, see § 230. The rough breathing regularly disappeared after -σ, -ν, -ρ, as in ἐσ-, ἐν-, ὑπερ-άλλομαι beside ἄλλομαι, but it was often restored again after the analogy of the simplex. The initial rough became the smooth breathing in Asiatic Ionic, Lesbian, Elean and in a part of the Cretan dialect.

CHAPTER VIII

THE FORMATION OF NOUNS AND ADJECTIVES

§ 233. In the formation of nouns and adjectives it is necessary to distinguish between the so-called root-nouns (§ 234) and nouns and adjectives which contain a suffix or formative element (§§ 235-86). Little is known of the origin of the numerous suffixes in the parent Indg. language and in the oldest periods of the separate languages. It is probable that most of the suffixes had originally an independent meaning and that in some cases they were independent words which sank down to be merely formative elements already in prim. Indo-Germanic. There is no reason to doubt but that many of the Indg. suffixes arose in the same or similar manner as we see them arise in the history of the individual languages, cp. the English suffixes *-dom*, *-hood*, *-ly*, all of which existed as independent words in the oldest period of the language, as *cynedōm*, *kingdom*, *frēodōm*, *freedom*, beside the simplex *dōm*, Goth. *dōms*, *judgment*; *cildhād*, *childhood*, *prēosthād*, *priesthood*, beside the simplex *hād*, *rank*, *grade*, Goth. *hāidus*, *manner*; *gēarlic*, *yearly*, *mennisclic*, *human*, beside the simplex *lic*,

Goth. *leik*, *body*. It should be noted that when a suffix is added to a stem which already contains a suffix, it is called a secondary suffix, as in *φέρουσα* from **φερον-τ-ja*, *μαντι-κό-ς* : *μάντι-ς*, *περυσι-νός* : *πέρυσι*. Prior to the time when case-endings, personal endings, &c. came into existence, the only difference between nouns and verbs was one of meaning and not merely of form. And this is the reason why so many of the same suffixes occur in the formation both of nouns and verbs, and similarly with reduplication, as in *βάρβαρος*, *γέργερος*, *μόρμορος*, *πάππα*, *τάτα*, *τήθη*, *ὄλολυς*, *ἐδωδή*, *παιπάλη*, *τέτανος*, &c. See § 429.

In the following paragraphs the suffixes are divided into two great classes according as they end in a vowel (§§ 235-68) or a consonant (§§ 269-86).

I. ROOT-NOUNS.

§ 234. Root-nouns, that is nouns in which the case-endings are added to the bare root without an intervening suffix or formative element. The root-nouns originally had various ablaut-grades in the different cases, but already in the parent Indg. language the levelling out of one or other of the ablaut-grades began to take place whereby one or more of the grades entirely disappeared. This process of levelling went still further in the prehistoric period of the separate languages with the result that one or other of the grades often became generalized throughout all the case-forms. In Greek the root-nouns may be divided into two categories, viz. those which preserve two or more ablaut-grades, and those which have the same grade throughout all case-forms.

1. Nouns which preserve two or more ablaut-grades, as *πούς*, Dor. *πώς*, Skr. *pât*, Lat. *pēs*, OE. *fōt*; acc. *πόδα*, Skr. *pādam*, Lat. *pedem* (cp. prep. *πέδα*), OE. *fōt*; gen. *ποδός*, Skr. *padāḥ*, Lat. *pedis*, see § 342.

βοῦς from **βους*, Skr. *gāuḥ*; acc. Dor. *βῶν*, Skr. *gām*; gen. *βοός*, see § 339.

Ζεύς from **djéus*, Skr. *dyáuḥ*; acc. *Ζῆν*, Skr. *dyām*; gen. *Διός*, Skr. *diváh*, see § 337.

χθών from **χθωμ*, *χιών* from **χιωμ*, gen. *χθονός*, *χιόνος*, see § 346.

2. Nouns which have the same ablaut-grade throughout all case-forms. The strong grade was generalized in *κρέξ*, *φλέψ*, *δόρξ*, *δψ*, *φλόξ*; the lengthened grade in *θώς*, *κλώψ*, *ρώξ*, *σκώψ*, *πτώξ*, *τρώξ*, *φώρ*, *ώψ*, *θήρ*, *κῆρ* from **κηρδ* (§ 230), *ψήρ*; and the weak grade in *θρίξ*, *ἰς* (§ 330), *νίφα* (acc.), *φρίξ*, *κίς*, gen. *κίος* (§ 330), *στύξ*, *ἰχθύς*, gen. *ἰχθύος* (§ 334), and similarly *μῦς*, *όφρυς*, *ῥς*.

In *ναῦς* from **ναῦς*, Skr. *nāuḥ* the long diphthong was levelled out into all the cases already in the parent Indg. language, see § 336.

2. SUFFIXES ENDING IN A VOWEL.

§ 235. *-jā-*. This suffix was chiefly used in the formation of feminine nouns and adjectives from the masculine of *u*- and consonant-stems, as *ἡδεῖα* from **σφαδεφja* : *ἡδύς* = Skr. *svādví* : *svādúḥ*, *sweet*, and similarly *βαρεῖα*, *γλυκεῖα*, *πλατεῖα*; *τέκταινα* from **τεκτανja* : *τέκτων* = Skr. *tákṣhī* : *tákṣan*, *carpenter*, and similarly *γείταινα*, *θεράπεινα*, *λέαινα*, &c.; *-aina* became extracted as an independent suffix for the formation of the feminine of the names of persons and animals from *o*-stems, as *ἡμιθέαινα*, *κάπραινα*, *λύκαινα*; *φέρουσα* from **φεροντja* : *φέροντ-* = Skr. *bhāranti* : *bhārant-*; *χαρίεσσα* from **-φετja*; *δότειρα* from **δοτερja* : *δοτήρ* = Skr. *dātrī* : *dātár-*; Att. Dor. *γεγονεῖα* from **-φεσja*, Ion. *γεγονυῖα* from **-υσja* : Skr. *-uṣī* (§ 552); *γλώσσα* from **γλωχja*, *θῆσσα* from **θητja*, &c.; in this manner was also occasionally formed the feminine from *o*-stems, as *πίειρα* : *πιερός* = Skr. *pīvarī* : *pīvaráh*; *ἐταῖρα* : *ἑταρος*, *μοῖρα* : *μόρος*.

On the form of the nominative singular in Greek and for further examples see § 322.

§ 236. The suffixes **-o-**, **-ā-**. The **-o-** originally formed the second syllable of dissyllabic light bases and was regular in such words as *λύκος*, Skr. *vṛkaḥ*, Lat. *lupus*, from an original Indg. form **wlqós*, *wolf*, and similarly in *ζυγόν*, Skr. *yugám*, Lat. *jugum*, *yoke*. From such words the **-o-** became extracted as a suffix and was extended to bases which had not originally the accent on the second syllable (cp. § 456). The **-o-** stood in ablaut relation to **-e-** just as in the verbal forms *φέρο-μεν* : *φέρε-τε*, cp. *λύκο-ς*, Skr. *vṛka-ḥ*, Lat. *lupu-s* : voc. *λύκε*, *vṛka*, *lupe*. In like manner the **-ā-** probably formed originally the second syllable of dissyllabic heavy bases (cp. § 458) from which the **-ā-** was extracted as a suffix already in the prim. Indg. period and then became used for the formation of the feminine.

With the suffixes **-o-**, **-ā-** were formed a large number of nomina actionis, nomina agentis, verbal abstract nouns, and adjectives, as *βρόμος*, *γόνος*, *δρόμος*, *λόχος*, *πλόος*, *τόκος*, *τρόμος*, *τρόπος*, *τρόχος*, *φθόρος*, *φόβος*, *φόνος*, *χόος*, and with changed meaning, as *δόμος* (Skr. *dāmaḥ*) : *δέμω*, and similarly *αἶθος*, *βόλος*, *γόμφος*, *λόγος*, *νόμος*, *ὄγκος*, *οἶκος* (Skr. *věśaḥ*, Lat. *vīcus*), *πλόκος*, *ρόος*, *στροφήος*, *στοῖχος*, *τοῖχος*, *τόμος*, *τροπός*, *τρόχος*, *φόρος*.

δοιδός, *ἀρχός*, *κλοπός*, *πομπός*, *τροφός* ; cp. Lat. *procus* : *precārī*.

ἀμοιβή, *αἰοδή*, *βαφή*, *βολή*, *γονή*, *νομή*, *πλοκή*, *πομπή*, *σκοπή*, *σπουδή*, *στέγη*, *στροφή*, *τομή*, *τροπή*, *τροφή*, *τροχή*, *φθορά*, *φορά* ; *δίκη*, *μάχη*, *ρίπή*, *φυγή* (Lat. *fuga*). *βορά*, *έρση* (Hom. *έέρση*), *ρόή*. *γυνή* (Boeot. *βανή*), *δούλη*, *κόρη*, &c.

αἶθος, *βορός*, *λοιπός*, *στραβός*, *τομός*, *φορός*.

With **-o-**, **-ā-**, as secondary suffixes, were formed nouns like *ἰατρός* : *ἰατήρ*, *ὑδρος* (Skr. *udrāḥ*) : *ὑδωρ*, adj. *πιαρός* : *πιαρ*. *πέδον* (Skr. *padám*) : **ped-*, *φοῖ*, *πέλεκκον* from

*πέλεκυν : πέλεκυς, ἄστρον : ἀστήρ, ἥτρον : ἥτορ. πτυχή : πτύξ, φράτῤῥα : φράτῥηρ, φρίκη : φρίξ.

§ 237. -(i)jo-, -(i)jā-. These suffixes were chiefly used in the parent Indg. language for the formation of (1) denominative adjectives, (2) verbal adjectives, and (3) adjectives with a comparative meaning. The neuter and feminine of (1) and (2) often became used as nouns in Greek.

1. Denominative adjectives, as ἵππιος, Skr. áśvyaḥ : ἵππος, áśvaḥ, horse, θεῖος : θεός, τίμιος : τιμή, and similarly ἄγριος, ἄρτιος, γομφίος, δῖος (Skr. divyāḥ), δόχμιος, ἡσύχιος, κοινός, κύκλιος, μειλίχιος, ξένιος, ὄμβριος, τεσσαράβιος from *-βοϝjos, χεῖλιοι. θεῖον, ἐνύπνιον. ξενία, after the analogy of which were formed nouns like ἀγγελία, σοφία.

λιμένιος : λιμήν, δαιμόνιος : δαίμων, and similarly ἀγώνιος, αὐχένιος, ποιμένιος, χθόνιος. ἀρνίον, λιμνίον, ποίμνιον.

πάτριος, Skr. pítṛ(i)yaḥ, Lat. patrius : πατήρ, pítár-, pater, σωτήριος : σωτήρ, and similarly αἰθέριος, ἀστέριος, ἀνακτόριος, θελκτήριος, μακάριος, φώριος. ἀνδρίον, αὐρίον, θελκτήριον. ἀνακτορία, σωτηρία. From forms like θελκτήριος was extracted the suffix -τηριο- which became used in forming words like δατήριος, δηκτήριος, διαβατήριος, ἱκετήριος ; ἀκροᾷτήριον, δειπνητήριον.

πεζός (Skr. padyāḥ) from *pedjos, ἡμάτιος : ἡμαρ (gen. ἡματος), φιλοτήσιος : φιλότῃτ-, γερούσιος : γέροντ-, ἐκούσιος : ἐκόντ-, διχθάδιος : διχθάδ-, λῆϊδιος : λῆϊδ-. χερμάδιον, ὀρνίθιον, παιδίον. From forms like ἀσπίδιον : ἀσπίς (gen. ἀσπίδος) was extracted the suffix -ίδιο- which became used in forming neuter diminutives like ἀγρίδιον, ἀδελφίδιον, αἰγίδιον, ξιφίδιον, &c.

γῆραιός : γῆρας, ἔτειος : ἔτος (gen. ἔτεος), αἰδοῖος : αἰδώς (gen. αἰδός), and similarly γεραιός, κνεφαῖος, ἐρκεῖος, ὄρειος, ἡϊός ; after the analogy of which were formed δίκαιος, δούλειος, ἵππειος, χρύσειος, &c.

ἀγοραῖος : ἀγορά, and similarly ἀναγκαῖος, ἀντιπέραιος,

πετραῖος, after the analogy of which were formed ὀδαῖος, νησαῖος.

With *-ejo-* (= *-eo-*, Skr. *-aya-*, Lat. *-eo-*) were formed adjectives like αἰγεος, ἀργύρεος, κύνεος, λίθεος, σιδήρεος, φλόγεος, χρύσεος; cp. Lat. *aureus*, *igneus*, *lapideus*. ὄρνειον, ὀστέον.

With *-ew(i)jo-* were formed ἀστεῖος : ἄστν, γένειον : γένυν, χέλειον : χέλυν.

Att. βασιλῆιος, χάλκειος, Ion. βασιλῆιος, χαλκῆιος, from *-ηφιος* older *-ηφιγος*, after the analogy of which was formed Att. πολέμειος, Ion. πολεμήιος : πόλεμος.

2. Verbal adjectives, as ἄγιος (Skr. *yājyaḥ*) : ἄζομαι, πάγιος, στύγιος, σφάγιος. σφάγιον. μανιᾶ, πενιᾶ.

3. With originally comparative meaning, as ἄλλος (§ 129, 2), Lat. *alius*, Goth. *aljis*, *other*; μέ(σ)σος from *μέθjos, Skr. *mádhyaḥ*, Lat. *medius*, Goth. *midjis*, *middle*.

4. From adverbs ending in *-i*, and from the locative in *-i*, as ἀντίος : ἀντί, ἄρτιος : ἄρτι, πρώιος : πρῶι; ἐνάλιος, ἐπιχθόνιος, καταχθόνιος, ὑποχείριος.

§ 238. *-wo-*, *-wā-*. These suffixes were comparatively rare in the parent Indg. language, and did not become very productive in any of the separate languages. Examples are : ἵππος (§ 124, 2), Skr. *áśvaḥ*, Lat. *equos*, *horse*, Att. ὄλος, Ion. οὔλος (Skr. *sárvaḥ*) from *σολφος, Att. στενός, Ion. στεινός from *στενφος, ὀρθός (Skr. *ūrdhvāḥ*, Lat. *arduus*), Hom. τέλειος from *τελεσφος, and similarly βαλῖος, δεξιός, ἡίθεος, λαιός (Lat. *laevos*), οἶος, πελῖος, πολιός, σκαιός (Lat. *scaevos*), φαιός, φαλῖος, κενός, Ion. κεινός, μᾶνός, μόνος, Ion. μουνος, Att. ξένος, Ion. ξείνος, Att. ὄρος, Ion. οὔρος, Att. κόρος, κόρη, Ion. κοῦρος, κούρη, Hom. ἴσος, Att. ἴσος from *φιτσφος. ποῖᾶ.

§ 239. *-mo-*, *-mā-* were chiefly used in the formation of verbal abstract nouns, many of which became concrete in Greek, as ἀνεμος, ἀρδμός, ἀρμός, ἀρπαγμός, θῦμός, θωμός, ἰγμός, κάλαμος, κέραμος, κευθμός, κηρῦγμός, κνημός, κορμός,

κρῦμός, λιμός, λοιμός, μυγμός, ὄγμος (Skr. *ājmaḥ*), ὀδυρμός, οἶμος, ὄρμος, παρμός, τῶρμος, φλογμός, φορμός. Adjectives like δοχμός, θερμός (Skr. *gharmāḥ*, *heat*, Lat. *formus*), σῆμος.

ἀκμή, γνώμη, θερμή, κνήμη, λόχημη, μνήμη, ὀδμή, ὀρμή, πυγμή, σκάλημη, τῆμη, φήμη, χάρημη.

Beside *-mo-*, *-mā-* there also occur *-dhmo-*, *-dhmā-*, where *-dh-* is the so-called root-determinative found in verbs like πλήθω (§ 475), and more rarely *-smo-*, *-smā-*, *-tmo-*, *-tmā-*, as ἀρθμός, ἀριθμός, βαθμός, γευθμός, κηληθμός, κλαυθμός, κυζηθμός, μηνιθμός, πορθμός, ρυθμός, σταθμός; εἰσιθμη, στάθμη. δασμός: δατέομαι, σχισμός; ὁσμῆ for older ὀδμή; and with regular loss of interconsonantal *-s-* (§ 185) in μυχμός, πλοχμός, ῥωχμός; αἰχμή. ἐρετμός: ἐρέτης; ἐφετμή: ἐφέτης.

-i-mo-, where *-i-* was of various origin, was used as a secondary suffix in the formation of adjectives like αἰσιμος, ἄλκιμος (Hom. loc. ἀλκί), βάσιμος: βάσις, κάλλιμος, κῦδιμος, λύσιμος, μóriμος, ὄβριμος, ὄψιμος, φαίδιμος, φύξιμος, χρήσιμος.

§ 240. *-meno-*, *-menā-* were used in the formation of the medio-passive participles. The original forms probably were *-méno-* (preserved in the perfect participles, as πεπυσμένος, λελειμμένος), ² *-mono-* (preserved in Sanskrit in participles like *bōdhamānaḥ*), and *-mnó-* (preserved in Greek in forms like στάμνος, βέλεμνον, κρίμνον; cp. Lat. *alumnus*, *autumnus*), see § 553.

§ 241. *-no-*, *-nā-* occur as primary and secondary suffixes in the formation of a large number of nouns and adjectives.

1. Primary in αἶνος, ἄμνος, θρόνος, θῦνος, καπνός, κύκνος, οἶνος, ὄκνος, τόρνος, ὕπνος (Skr. *svāpnaḥ*), φρῦνος, χρόνος, ὦνος; κράνον, στέρνον, τέκνον; αἶνη, ζώνη, ποινή, φερνή, φρῦνη, ὦνη; δάνος.

ἀγνός (Skr. *yajñāḥ*), Hom. ἀλαπαδνός, γυμνός, δεινός, λάγνος, λίχνος, ῥικνός, σεμνός, σμερδνός, σπαρνός, στεγνός, στυγνός.

2. Secondary in *ἐαρινός* : loc. *ἔαρι*, *ἐσπερινός*, *ἡμερινός*, *νυκτερινός*, *περυσινός* : *πέρυσι*, *χειμερινός*, &c. *φαινός* from **φαφσνος* : *φάος*, and similarly *ἀλγεινός*, *ἐλκεεινός*, *κελαδεινός* ; *σελήνη* : *σέλας*.

§ 242. *-ανο-*, *-ανᾶ-* in nouns and adjectives, as *κοίρανος*, *οὐρανός*, *ράφανος*, *στέφανος*, *χόδανος* ; *δρέπανον*, *ἔδρανον*, *θήγανον*, *κόπανον*, *πόπανον*, *σκέπανον*, *τύμπανον* ; *δρεπάνη*, *θηγάνη*, *μηχανή*, *στεγάνη*, *στεφάνη*.

βάσκανος, *ἐδανός*, *ικανός*, *ὀλίσθανος*, *πιθανός*, *σκεπανός*, *στεγανός*.

§ 243. *-ino-*, used in forming adjectives denoting material, origin, &c., as *ἄλινος*, *ἄνθινος*, *ἀνθρώπινος*, *βύβλινος*, *γῆινος*, *ἰχθυϊνός*, *κέρδινος*, *λαϊνός*, *πύξινος*, *φήγινος* (Lat. *fāginus*), *φλόγινος*, *χύτρινος*.

§ 244. *-ino-*, *-inā-*, used in forming adjectives and nouns, as *ἀγχιστίνος*, *γελαστίνος*, *ἐρυθρῖνος*, *κεστρίνος*, *κορακῖνος*, *τυφλῖνος*, *φοξῖνος*, *χυτρίνος* ; cp. Skr. *navīnah*, *new*, Lat. *divīnus*, *equīnus*, *suīnus*.

δελφακίνη, *πολυποδίνη*, *χοιρίνη*.

§ 245. *-s-no-*, *-s-nā-*, used in forming nouns and adjectives, as *ἀράχνη* from **ἀρακσνᾶ*, *λύχνος* from **λυκσνος* (§ 185), and similarly *ἄχνη*, *πάχνη* ; *λάχνος*, *μόρφνος*, *συχνός*, *δέννος* from **δετσνος*.

§ 246. *-συνο-*, *-συνᾶ-*. The origin of these secondary suffixes is unknown. They were used in forming adjectives the feminine of which became used as abstract nouns, as *γηθόσυνος*, *δουλόσυνος*, *θάρσυνος* from **θαρσο-συνος*, *πίσυνος* from **πισο-συνος* ; *δικαιοσύνη*, *δουλοσύνη*, *κλεπτοσύνη*, *μνημοσύνη*, *σωφροσύνη* ; after the analogy of these were formed *κερδοσύνη* : *κέρδος* (neut.), *μαντοσύνη* : *μάντις*, &c.

§ 247. *-λο-*, *-lā-*, used both as primary and secondary suffixes, especially the latter, in the formation of nouns and adjectives.

1. Primary, as *βηλός*, *γαῦλος*, *γαυλός*, *καυλός*, *στῦλος*, *τύλος* ; *ξύλον*, *σκῦλον*, *φῦλον*, *πέταλον* ; *ζεύγλη*, *θηλή*,

ὀμίχλη, στρέβλη, τύλη, φύλη, ἀελλα from *αφελχα : ἀημι, κεφαλή.

δειλός, ἔκπαγλος, στρεβλός, τυφλός, πέταλος.

2. Secondary, as ἀγγελος, κάπηλος; δείκελον; ἀγέλη, θυμέλη, νεφέλη, πῖμελή, ἀγκύλη, εὐχωλή, παυσωλή, τερπωλή, φειδωλή.

ὀμαλός, πῖαλος, χθαμαλός, ἀ(φ)είδελος, δεελός, στυφελός, ἀγκύλος, δριμύλος, ἡδύλος, παχυλός, ἀπατηλός, σῖγηνλός, καταρῖγηνλός, μῖμηνλός, στροβιλός, φειδωλός. From forms like ἡδύλος, παχυλός with diminutive meaning was extracted the suffix -υλο- which became extended to forms like ἀρκτύλος : ἄρκτος, μικκύλος : μικκός, and similarly with the extensions -υλλο-, -υλλιο-, -υλλιδ-, υλλιδιο-, as καθάρυλλος : καθαρός, ἀνθύλλιον : ἄνθος, ἐπύλλιον : ἔπος, ἀκανθυλλίς (-ίδος) : ἀκανθίς (-ίδος), μειρακυλλίδιον : μεϊράκιον. πῖαλέος from *πῖαλεφος : πῖαλος, and similarly αἰμαλέος, ἰκμαλέος, κρῦμαλέος, from which -αλέος was extracted as a suffix and extended to forms like διψαλέος : δίψος, ὑπναλέος, ψευδαλέος.

§ 248. -ro-, -rā-, used both as primary and secondary suffixes in the formation of nouns and adjectives.

1. Primary, as ἀγρός (Skr. ájraḥ, Lat. ager, Goth. akrs), ἀφρός, βόθρος, κάπρος (Lat. caper), κλήρος, νεκρός, νεφρός, ὄμβρος, τάλαιρος, ταῦρος (Lat. taurus), χίμαρος; δῶρον, πλευρόν; ἔδρᾱ, τάφρη, χώρα.

ἄκρος, ἐρυθρός (Skr. rudhiráḥ, Lat. ruber), λαμπρός, λεπρός, λυπρός, μακρός, μικρός (σμικρός), μῶρος, πικρός, σαπρός, σινδρός, σκληρός, τρηρός, φαιδρός, χῆρος, χλωρός, χοῖρος, ψυδρός, ψωρός; βριαρός, γεραρός, ἱαρός, λιπαρός, πῖαρός, ὕδαρός.

2. Secondary, as πενθερός, πτερόν, ἄργυρος, ξέφυρος, μάρτυρος.

βλαβερός, δροσερός, ἐλεύθερος, θαλερός, κρατερός, ξερός, στυγερός, σχερός, φοβερός, γλαφυρός, ἐχυρός, καπυρός, κινυρός, λιγυρός, μωλυρός, ψιθυρός, ἀνιᾶρός, ἀσηρός, ὀδυνηρός, ὀκνηρός, ὀλισθηρός, πονηρός, ἰσχῦρός, οἰζῦρός.

§ 249. The suffixes **-bho-**, **-bhā-** became productive in Greek, especially in the formation of the names of animals, as *ἀσκάλαφος*, *ἐλαφος*, *ἔριφος*, *κιδάφη*, *κίδαφος*, *κίραφος*, *κόραφος*, *κόσσυφος*, Att. *κόττυφος*, *σέρφος*. *ἀλφός*, *ἔδαφος*, *κέραφος*, *κόλαφος*, *κορυφή*, *κρόταφος*, *φλήναφος*. *ἄργυφος*, *στέριφος*. From the nouns in *-αφος* was formed the diminutive suffix *-άφιον*, as in *θηράφιον*, *ξυλάφιον*, *ξυράφιον*.

§ 250. **-dhlo-**, **-dhlā-**. The origin of these suffixes is unknown. Examples are: *γένεθλον*, *ἔδεθλον*, *θέμεθλον*, *θύσθλον*; *γενέθλη*, *ίμάσθλη*; *ἔσθλος*.

§ 251. **-dhro-**, **-dhrā-**, used in forming nouns and adjectives, as *μυλωθρός*, *ὄλεθρος*; *ἄρθρον*, *βάθρον*, *βάραθρον*, *κλήθρον*, *κώρηθρον*, *μέλπηθρον*, *πέλεθρον*, *πλέθρον*, *ρείθρον*, *τέρθρον*; *κοιμήθρᾱ*, *κρεμάθρᾱ*.

βλωθρός, *λάληθρος*, *σκεθρός*, *σκυθρός*.

§ 252. **-ko-**, **-kā-**, or **-qo-**, **-qā-**. These secondary suffixes were common in all the languages, especially in the forms **-iko-**, **-ikā-** which started out from *i*-stems (*μαντικός* : *μάντις*) and then became extended to other kinds of stems, as *ἀγωνικός*, *ἀνδρικός*, *ἀστικός*, *ἐθνικός*, *θηλυκός*, *ἵππικός*, *κριτικός*, *μαθητικός*, *μερικός*, *νυμφικός*, *πηλίκος*, *τηλίκος*, *τῆμῆτικός*, *φυσικός*; cp. Lat. *modicus*. *ιέρᾱκος*, *πίθηκος*, Dor. *πίθᾱκος*; *πρόκα* : *πρό*; *θήκη*.

In derivatives of *jo*-formations we have *-ιακος*, as *καρδιακός*, *κῦριακός*, *πλονσιακός*, *σκιακός*.

§ 253. **-sko-**, **-skā-** are related to the presents in **-sko-** (§ 469), as in *ἄρεσκος* : *ἄρέσκω*, *βοσκή* : *βόσκω*, *δίσκος* from **δικσος* (§ 186).

It is doubtful whether the **-sk-** in **-isko-**, **-iskā-** is of the same origin. These suffixes became productive, especially in the formation of diminutives, as *ἀνθρωπίσκος*, *δεσποτίσκος*, *νεανίσκος*, *οἰκίσκος*, *παιδίσκος*, *χοιρίσκος*; *ἀσπιδίσκη*, *οἰκίσκη*, *παιδίσκη*, *ὑδρίσκη*.

§ 254. **-tero-**, **-terā-** were common suffixes in the forma-

tion of comparatives from adjectives, adverbs, nouns and pronouns, as *κουφότερος, σοφώτερος, γλυκύτερος, ἀληθέστερος, χαριέστερος, γεραίτερος, μεσαίτερος, πεπαίτερος, σχολαίτερος, δεξιτερός*, see § 376. *άνώτερος, ἀφάρτερος, πρότερος, ὑπέρτερος, παλαιέτερος, ὑψίτερος. ἀγρότερος, βασιλεύτερος, δημότερος, θηλύτερος, κύντερος, ὀρέστερος. ἡμέτερος, ὑμέτερος* (see § 406), *ἕτερος*, Dor. *ἄτερος*.

§ 255. *-tewo-, -tewā-*, used in the formation of verbal adjectives, as *γραπτέος, δοτέος, δραστήος, λειπτέος, λυτέος, τιμητέος*, see § 556.

§ 256. *-tlo-, -tlā-* which are of doubtful origin, as in *ἄντλος; σεῦτλον, χύτλον; ἐχέτλη*.

§ 257. *-tro-*, used especially in the formation of neuter nouns denoting an implement, as *ἄροτρον* (Lat. *arātrum*), *βάκτρον, δέλετρον, ἔλυτρον, ζῶστρον, κέντρον, λέκτρον, λουτρόν, μέτρον, μήνυτρον, νίπτρον, πλήκτρον, στέγαστρον, τέρετρον, φέρετρον* (φέρτρον).

§ 258. *-to-, -tā-*. These suffixes were chiefly used in the parent Indg. language in the formation of verbal adjectives, and of ordinal numerals.

1. The verbal adjectives had originally the accent on the suffix and the base had accordingly the weak grade of ablaut, but in Greek as in other languages the verbal adjective was sometimes formed direct from the present with the strong grade of ablaut, as *ἄ-ιστος, ἄ-κριτος, ἄ-νιπτος, ἄ-πιστος, βατός* (Skr. *gatáh*, Lat. *in-ventus*), *δρατός* (*δαρτός*) : *δέρω, κλυτός* (Skr. *śrutáh*, Lat. *in-clutus*), *πεπτός* (Lat. *coctus*), *ρύτός* (Skr. *srutáh*), *σχετός* : *σχεῖν, τατός* (Lat. *tentus*), *φατός, φθιτός, ἀ-δάματος, ἄ-κράτος, βρωτός, γνωτός* (Skr. *jñātáh*, Lat. *nōtus*), *δοτός* (Lat. *datūs*), *ἐλατός, ἐμετός* (Lat. *vomitūs*), *θετός* (Skr. *hitáh*), *θνητός, κμητός, στατός* (Skr. *sthitáh*, Lat. *status*), *στρωτός; ζευκτός* beside Skr. *yuktáh*, and similarly *γευστός, φερτός, φευκτός, πηκτός*. See § 555.

The masculine, feminine and rarely the neuter of the

verbal adjectives often came to be used as abstract nouns (sometimes with concrete meaning) in Greek as also in other languages, as *ἄμητος*, *βίωτος*, *βλαστός*, *ἔμετος*, *θάνατος*, *κάματος*, *νιφετός*, *νόστος*, *οἶτος*, *παγετός*, *πλοῦτος*, *φόρτος*, *χόρτος*. *ἀήτη*, *ἀκτή*, *ἀρετή*, *αὐτή*, *βιοτή*, *βλάστη*, *βροντή*, *γενετή*, *ἐν-ετή*, *κοίτη*, *μελέτη*, *πινυτή*, *σπάρτη*, *τελευτή*. *σπάρτον*, *φυτόν*.

The feminine abstract nouns, which came to denote persons, became masculine and then took -s in the nominative and formed their gen. singular after the analogy of the o-declension (§ 323), and similarly with the denominatives in -tā-, as *γενέτης*, *δέκτης*, *δεσμώτης*, *κλέπτης*, *κοσμητής*, *κριτής*, *μαθητής*, *οἰκέτης*, *ποιητής*, *υφάντης*, *προφήτης*, *ψάλτης*; *ἀγρότης*, *ἀσπιστής*, *δεσπότης*, *δημότης*, *ιδιώτης*, *ἱππότης*, *κορυστής*, *πολυβούτης*, *στρατιώτης*, *τελεστής*, *τοξότης*, *φυλέτης*. After the analogy of *ὀφίτης* : *ὄφις*, *πολίτης* : *πόλις* were formed *ὀδίτης* : *ὁδός*, *ὀπλίτης* : *ὄπλον*, *τεχνίτης* : *τέχνη*.

2. In ordinals, as *τρίτος*, *τέταρτος* (Lat. *quartus*), *πέμπτος* (Lat. *quintus*, Lith. *peñktas*), *ἕκτος* (Lat. *sextus*, Goth. *saíhsta*), *δέκατος*, *είκοστός*, &c. See §§ 389-93.

On the superlative ending -τατο-, as in *ἀληθέστατος*, *βέλτατος*, *κουφότατος*, *μελάντατος*, *ὀξύτατος*, *σοφώτατος*, *φέρτατος*, *φίλτατος*, &c., see § 377, 4.

§ 259. -is-to-, -is-tā- (Skr. -iṣṭha-, Goth. -ista-), used in the formation of the superlative of adjectives, as in *αἰσχιστος*, *ἄριστος*, *βέλτιστος*, *ελάχιστος*, *ἐχθιστος*, *ἡδιστος*, *κάλλιστος*, *κράτιστος*, *κύδιστος*, *μέγιστος*, *ὀλίγιστος*, *πάχιστος*, *πλείστος*, *πρώτιστος*, *τάχιστος*, *φέριστος*, *χείριστος*. See § 377, 2.

§ 260. -i-. This suffix is probably identical in origin with the -i- which occurs in the second syllable of dissyllabic heavy bases (cp. § 481). In Greek it is fairly common in nouns but rare in adjectives, as *ἄρδις*, *δῆρις* : *δέρω*, *ἔρις*, *μῆνις*, *οἶς*, *οἷς* (Skr. *áviḥ*, Lat. *ovis*, Lith. *avis*),

ὄρχις, ὄφις (Skr. áhiḥ), πόλις, πόρις, στρόφις : στροφέω, τρόπις, τρόχις; τρόφις. On the various grades of ablaut which originally occurred in the different cases see § 328. The oblique cases of some i-stems were often formed after the analogy of stems in -ιδ- (§ 343), cp. ἔρις (Skr. áriḥ, enemy), acc. ἔριν beside gen. ἔριδος, &c., μῆνις, τρόπις, gen. μῆνιδος, τρόπιδος.

§ 261. The suffixes -mi-, -ni-, -ri- were very rare in Greek as also in most of the other Indg. languages, as ἔλμις, worm, θέμις (gen. θέμιτος, θέμιδος after the analogy of stems ending in a dental), φῆμις; εὔνις; ἄκρις, ὄκρις (Skr. áśriḥ, Lat. ocris); ἴδρις.

§ 262. The suffix -ti- became productive in all the Indg. languages in the formation of primary verbal abstract nouns of the feminine gender. The root-syllable had originally the weak grade of ablaut, as βάσις (Skr. gátih), κλίσις, κτίσις, πίστις, πλύσις, πύστις, ρύσις (Skr. srutih), σχέσις, σχίσις, τάσις, τίσις, φθίσις, χύσις; δέσις, δόσις, θέσις, στάσις (Skr. sthítih), φάσις; ἀησις, βρώσις, γένεσις, γνώσις (Skr. jñātih), ἔμεσις, κρέμασις, ὄνησις, τάραξις, φράσις, φύσις. Forms with the strong grade of ablaut in the root-syllable were new formations, as ἄμ-πωσις, δείξις (cp. Skr. diśtih), ἔκ-λειψις, ζεύξις (Skr. yuktiḥ), λήξις, πῆξις, ρεύσις beside ρύσις, τέρψις, φεύξις. ἀξίωσις, κόσμησις, ὀρασις, φόρησις. The masculine μάντις was also originally a feminine abstract noun. See § 169.

§ 263. -i- (but -ij- before vowels, cp. Skr. nadīḥ, river, gen. nadīyah, &c.), used in forming feminine nouns and adjectives. The nouns and adjectives containing this suffix mostly came to be inflected after the analogy of dental-stems already in prim. Greek (§§ 330, 343), cp. Hom. ἡνις (acc. ἡνιν), κνημίς, gen. κνημίδος, and similarly βλω-συνώπις, εὐπλοκαμίς.

§ 264. -u-. This suffix was used in the formation of nouns and adjectives, especially the latter, as βαθύς, βαρύς (Skr.

gurúh, Goth. kaúrus), βραδύς, βραχύς, γλυκύς, ἐλαχύς, εὐρύς, ἡδύς (Skr. svādúh), θρασύς, κρατύς, λιγύς, παχύς (Skr. bahúh), πλατύς, πολύς (Skr. purúh), ταρφύς, τρᾶχύς, ὠκύς (Skr. āśúh). πῆχυς (Skr. bāhúh), ἄρκυς, γένυς (Skr. hánuh, Goth. kinnus), γῆρυς, στάχυς; γλάφυ, γόνυ (Skr. jánu), δόρυ (Skr. dāru), μέθυ (Skr. mādhu), πῶν. See § 343. On the various grades of ablaut which originally occurred in the different cases see § 331.

§ 265. The suffixes *-lu-*, *-nu-*, *-ru-* were very rare in Greek as also in the other Indg. languages, as θῆλυς (Skr. dhārúh); λιγνύς, Hom. θρήνυς; βότρυς, δάκρυ (Lat. lacru-ma).

§ 266. *-tu-*, especially used in the formation of verbal abstract nouns which are feminine in Greek, but masculine in Latin and mostly also in Aryan and the Germanic languages, as ἀκοντιστός, ἀλαωτός, ἀπ-εστός : ἐστί, ἀρπακτός, ἀρτός (Lat. artus), ἀσπαστός, βοητός, βρωτός, γραπτός, δαιτός, ἐδητός, ἴτυς (Lat. vitus), κλειτός (κλιτός), ὀρχηστός, πίτυς (Skr. pitúh), ποθητός, ρυστακτός, φραστός, χαλεπτός. This type of noun became very productive in Ionic. The same suffix also occurs in the neuter nouns ἄστν (Skr. vāstu, place), φῖτν, and in feminine numerals like τριττός, τετρακτός, πεντηκοστός, ἑκατοστός, χίλιοστός.

§ 267. *-ū-* (but *-uw-* before vowels, cp. Skr. tanúh, *body*, gen. tanúvāh), used in forming feminine nouns, as ἰλύς, ἰσχύς, ὀσφύς, ὀφρῦς, πληθύς, χέλϋς. The nouns belonging to this type preserved their original inflexion (§ 334) in Greek, Aryan and the Baltic-Slavonic languages, but in the other languages they went over into the *ū*-declension.

§ 268. Prim. Greek *-ēu-* (but *-ēw-* before vowels) occurs almost exclusively in the formation of nomina agentis, as βασιλεύς, γονεύς, γραφεύς, ἡνιοχεύς, ἱερεύς, ἱππεύς, νομέυς, πομπεύς, τοκεύς, φονεύς, φορεύς. For the inflexion of nouns belonging to this type see § 334. The origin of the *-ēu-*, which is not found in the other Indg. languages, has

never been satisfactorily explained. According to Brugmann, *Griech. Grammatik* (§ 182) it probably started out from verbal adjectives in *-η-φ(ο)-* to verbs in *-έω*, as **φορη-φ(ο)s* (cp. *φορητός*) : *φορέω* which would regularly become *φορεύς* (§ 63).

3. SUFFIXES ENDING IN A CONSONANT.

§ 269. *-en-* with the various ablaut-grades *-en-*, *-on-*, *-ēn-*, *-ōn-*, *-n-* but *-ŋ-* before consonants, see § 345. This suffix had various functions. It was especially used in the formation of nouns denoting (1) animate objects, as *ἀρηγών*, *γείτων*, *κύν* (Skr. *śván-*), *στίγων*, *τέκτων* (Skr. *tákṣan-*), *τρῦγών*, *ἀρήν*, *ἄρσην* (*ἄρρην*, Ion. *ἔρσην*); *αἶθων*, *γάστρων*, *γνάθων*, *δρόμων*, *κύφων*, *στράβων*, *τρίβων*, *τρήρων*, *ψυθών*; *οὐρανίων* : *οὐράνιος*, from this and similar forms the *-ίων* was extracted and extended to *o*-stems, as *δειλακρίων* : *δείλακρος*, *μαλακίων* : *μαλακός*. (2) Parts of the body, as *ἀγκών*, *βουβών*, *πυγών*, *φαγών*, *ἀδήν*, *αὐχὴν*, *σπλήν*, *φρὴν*.

The origin of the formation of the nouns in *-ών* (Ion. *-έων*) denoting a place is unknown, as *ἀνδρών*, *δαφνών*, *ἱππών*, *λασιών*, *παρθενών* (*παρθενέων*).

§ 270. *-(i)jen-* with the various ablaut-grades *-(i)jen-*, *-(i)jon-*, *-(i)jēn-*, *-(i)jōn-*, *-in-*, *-īn-*, the *-īn-* of which became generalized in Greek, see § 348. This suffix only occurs in the formation of a small number of nouns, as *ἄκτιν-*, *γλωχίν-*, *δελφίν-*, *ὠδίν-*.

§ 271. The suffix *-wen-* with the same ablaut-grades as *-en-* was rare in Greek, as *πίων* (Skr. *pívan-*), *ἀ-πείρων* from **ἀπερφων*; *δελέατ-* from **δελεφατ-* : *δέλεαρ*, Hom. *εἶδατ-* : *εἶδαρ*, *ὀνείατ-* : *ὀνειαρ*, *πείρατ-* : *πείραρ*, see § 371. Infinitive Cyp. *δοφεναι*, Att. *δοῦναι* (§ 546).

§ 272. *-d-en-* with the same ablaut-grades as *-en-* occurs in the formation of nouns from verbal stems, as *ἀλγηδών*, *ἀχθηδών*, *κλεηδών*, *μεληδών* (*μελεδών*), *πεμφρη-*

δών, πρηδών, σηπεδών, σπαδών, σχαδών, τηκεδών, τυφεδών, χαιρηδών, cp. formations like Lat. *frīgēdo*, *rubēdo*.

§ 273. **-men-** with the various ablaut-grades **-men-**, **-mon-**, **-mēn-**, **-mōn-**, **-mn-** but **-mṇ-** before consonants (§ 845) and **-mṇ** in the nominative and accusative singular of neuter nouns (§ 350). This suffix was used partly in the formation of *nomina actionis* (masculine and neuter) which often came to be used for the names of objects, and partly in the formation of *nomina agentis* and adjectives, as *ἄκμων* (Skr. *āśman-*), *ἄλῆμων*, *γνώμων*, *ἡγεμών*, *θημών*, *κευθμών*, *κηδεμών*, *λειμών*, *στήμων*, *τελαμών*, *τέρμων* (Lat. *termo*), *χειμών*, *λιμήν*, *ποιμήν*, *πυθμήν*, *ὑμήν*; used as a secondary suffix in *ἄκρεμών*: *ἄκρος*, *δαιτυμών*: *δαιτύς*. Adjectives like *ἄλῆμων*, *ἐλεήμων*, *εὐ-εἰμων*, *εὐ-θήμων*, *ἰδμων*, *τλήμων*. Neuters, as *εἶμα* (Skr. *vásma*, *cover*), *νῆμα* (Lat. *nēmen*), *ὄνομα* (Skr. *nāma*, Lat. *nōmen*, Goth. *namō*), *στρώμα* (Lat. *strāmen*), and similarly *ἀνά-θημα*, *βῆμα*, *βλήμα*, *γνώμα*, *δείμα*, *δέρμα*, *ἐπί-στημα*, *ἔρμα*, *ζεῦγμα*, *ῆμα*, *λείμμα*, *μίσθωμα*, *μνήμα*, *νεῦμα*, *νόημα*, *ὄραμα*, *ὄρεγμα*, *πνεῦμα*, *πῶμα*, *ρεῦμα*, *σέλημα*, *σῆμα*, *στέμμα*, *σχῆμα*, *τέρμα*, *ὑπό-δημα*, *φέρμα*, *φλέγμα*, *φῦμα*, *χείμα*, *χεῦμα*, *χρήμα*. For the inflexion of these nouns see § 350.

The suffix **-men-** also occurs in the Lesbian and Homeric infinitives (dative) like *ἰδμεναι* (Vedic *vidmánē*), *δόμεναι* (Vedic *dāmanē*), *ἔδμεναι*, *γνώμεναι*, *θέμεναι*, *φανήμεναι*, *ζεγγνύμεναι*, *ἐστάμεναι*, *τετλάμεναι*, &c., see § 546; and also in infinitives (endingless locative) like *ἰδμεν*, *τιθέμεν*, *θέμεν*, *δόμεν*, *ἐστάμεν*, *ὀρνύμεν*, &c., see § 549.

§ 274. **-t-**, **-dh-**, **-s-** (of various origin) + **-men-**, as in *αὐτμήν*, *λαῖτμα*; *ἰθμα*; *πλάσμα*: *πλάσσω*, *ἔρεισμα*: *ἐρείδω*, *ἄσπασμα*: *ἀσπάζομαι*, *νόμισμα*: *νομίζω*, *κλῶσμα*: *κλώθω*, *ἐπι-λήσμων*: *ἐπι-λήθω*.

§ 275. **-nt-** with the various ablaut-grades **-ént-**, **-ont-**, **-nt-**, **-ṇt-**. With this suffix were formed the masculine and neuter of all active participles except the perfect. For the

history of the various ablaut-grades in Greek and for the inflexion of the participles see §§ 352-5. Here belong also a number of verbal nomina which became nominal in Greek and a few pure nominal forms, as ἄρχων, γέρον, δράκων, ἐκὼν, κρείων, μέδων, μέλλων, ὀρίζων, φαέθων, πᾶς, ὁδούς (Skr. dánt-, dat-, Lat. dēns, dentis).

§ 276. -went- (= -fεντ-, Skr. -vant-), weak grade -wñt- (-fετ- with -ε- for -α- through the influence of -fεντ-, Skr. -vat-), see § 356. This suffix was used in Greek and Sanskrit in the formation of denominative adjectives denoting *possessing, endowed with*, as ὀπείς, *juicy* = Skr. ápavant-, *watery*, δολέεις, ἡνεμόεις, οἰνέεις, στονόεις, χαρίεις; from forms like *στονόfεντ-: στόνος the -οfεντ- was extracted and extended to other kinds of stems, as σκιδέεις, μητιδέεις, ἰχθυδέεις, νιφδέεις, κλωμακδέεις, θερόεις, κερδέεις, αἱματδέεις; αἰγλήεις, λαχνήεις, τιμήεις; from forms like *τιμᾶfεντ-: τιμᾶ the -ᾶfεντ- was extracted and extended to other kinds of stems, as μεστήεις, φοινήεις, δενδρήεις, οἰστρήεις, τελήεις.

§ 277. -er- with the ablaut-grades -er-, -or-, -ēr-, -ōr-, -r- but r before consonants, see § 359. In Greek this suffix only occurs in a few nouns, as δᾶήρ (Skr. dēvár-), ἀνήρ, ἄήρ, αἰθήρ.

§ 278. -ter- with the various ablaut-grades -ter-, -tor-, -tēr-, -tōr-, -tr- but -tr- before consonants, see §§ 359-61. This suffix was especially used in the formation of names of relationship and nomina agentis, as πατήρ (Skr. pitár-, Lat. pater, Goth. fadar), μήτηρ (Skr. mātár-, Lat. māter, OE. mōdor), θυγάτηρ (Skr. duhitár-, Goth. dauhtar), φράτηρ, φράτωρ, *member of a φρατρία* (Skr. bhrátar-, Lat. frāter, Goth. brōþar, *brother*), εὐ-πάτωρ, παμ-μήτωρ, ἄκτωρ (Lat. actor), ἀφ-ήτωρ, βώτωρ, γενέτωρ (Skr. janitár-, Lat. genitor), δώτωρ (Skr. dātár-, Lat. dator), ἐπι-βήτωρ, θηράτωρ, ἴστωρ, καλήτωρ, κτίστωρ, μήστωρ, παν-δαμάτωρ (Skr. damitár-), ῥήτωρ, σημάντωρ, ἀλεξητήρ, ἀροτήρ (Lat. arātor), ἀλληγήρ, γενετήρ, δμητήρ, δοτήρ, δωτήρ, ἐλατήρ,

ἐπ-ακτήρ, ζευκτήρ (Skr. *yōktár-*), θηρᾱτήρ, ὀλετήρ, οἶνο-
ποτήρ (Skr. *pātár-*, Lat. *pōtor*, *drinker*), φυλακτήρ. ἄσθήρ,
γαστήρ.

§ 279. *-es-* with the ablaut-grades *-es-*, *-os-*, *-ēs* (§ 366), *-ōs* (§ 368). This suffix was used in the formation of neuter nouns (mostly abstract), see § 364, and compound adjectives related to such nouns, see § 366, as well as in the formation of a few masculine and feminine nouns, see § 368. (a) Neuter nouns, as γένος (Skr. *jānas-*, Lat. *genus*), κλέος (Skr. *śrávas-*), μένος (Skr. *mānas-*), νέμος (Lat. *nemus*), ρίγος (Lat. *frigus*), and similarly ἄγκος, ἄγος, αἶθος, ἄκος, ἄνθος, ἄχος, βάθος, βέλος, βένθος, δάκος, δέος, ἔδος, εἶδος, ἔλεγχος, ἔλκος, ἔλος, ἔπος, ἔρεβος, ἔρκος, ἔτος, εὔρος, ζεύγος, θέρος, θράσος (θάρσος), κῆδος, κράτος (κάρτος), κῦδος, λέχος, λῆθος, λίπος, μῆκος, νέφος, πάχος, πέκος, πένθος, πλάτος, πύος, σάκος, σθένος, σκέλος, στέγος (τέγος), στέρφος (τέρφος), τάφος, τάχος, τεῖχος, τέκος, ψεῦδος. (b) Compound adjectives, as ἀ-κλήης, ἀ-ληθής, ἀν-αιδής, ἀ-σθενής, αὐτο-φυής, ἀ-ψευδής, δυσ-κλήης, ἀ-μενής, δυσ-μενής (Skr. *dur-manāh*), εὐ-μενής, εὐ-γενής, and the back-formations ἐλεγχής, φραδής, ψευδής, see § 366. (c) Masculine and feminine nouns, as γέλως, ἔρως, ἰδρώς, αἰδώς, Hom. ἡώς, Att. ἔως, see § 368. This type of noun became productive in Latin, cp. O.Lat. *arbōs*, *honōs*, &c.

§ 280. *-n-es-*, *-w-es-*, *-dh-es-*, as in the neuter nouns γλῆνος, δάνος, ἔθνος, ἔρνος, ἔχνος, σμῆνος; Hom. εἶρος from *ἔρφος, πῖ(ρ)ος (Skr. *pívas-*), στεῖνος from *στενφος, φᾶρος, Att. φάρος from *φάρφος; βρίθος, μέγεθος, πλήθος, στῆθος.

§ 281. *-jes-* with the ablaut-grades *-jes-*, *-jos-*, *-jōs-*, *-is-*, and *-ī-jes-*, *-ī-jōs-*, used in the formation of the comparative of adjectives. This mode of forming the comparative was only preserved in Greek in the accusative singular masculine and feminine, the nominative plural masculine and feminine, and the nominative and accusative of the neuter plural

(§ 369). For the formation of the comparative in Greek see §§ 375-6.

§ 282. **-wes-** with the ablaut-grades **-wes-**, **-wos-**, **-wōs-**, **-us-**, and **-wet-**, **-wot-**, used in Greek, Aryan and the Baltic-Slavonic languages in the formation of the perfect active participle, see § 552.

§ 283. **-əs-** (= Gr. **-ας**, Skr. **-iṣ-**), the **-ə** of which probably belonged originally to the second syllable of dissyllabic heavy bases with the accent on the first syllable. The **-əs-** is the weak grade of the **-ōs** in paragraph 279, and became generalized already in the parent Indg. language. It occurs in a considerable number of neuter nouns, as *βρέτας*, *γέρας*, *γῆρας*, *δέμας*, *δέπας*, *κέρας*, *κρέας* (Skr. *kraviṣ-*, *raw flesh*), *οὔδας*, *πέρας*, *σέλας*, *σκέπας*, *σφέλας*, *τέρας*, &c. For the inflexion of these nouns see § 370.

§ 284. **-tāt-** (Skr. and Lat. **-tāt-**), used in the formation of feminine abstract nouns from adjectives, as *νεότης*, Lat. *novitās* : *νέος*, *novos* ; *δλότης*, Skr. *sarvātāt-* : *ὅλος*, *sārvaḥ*, and similarly *ἀπλότης*, *ισότης*, *κακότης*, *ὀρθότης*, *σκαιότης*, *φιλότης*, *βαρύτης*, *βραδυτής*, *γλυκύτης*, *παχύτης*, *ταχυτής*. From forms like **νεφοτᾶτ-* the **-οτᾶτ-** (cp. § 51) was extracted as a suffix and extended to consonantal stems *ἐνότης*, *μελανότης*, *παντότης*, *χαριεντότης*. See § 343.

§ 285. In a considerable number of nouns and adjectives the suffix seems to consist of a simple explosive (**t**, **k** (= Indg. **k** and **q**), **d**, **g**) which in some cases at least was the weak grade form of an explosive + **-o-** or **-ā-**, cp. *ἄ-γνώς* : *ἄ-γνω-τος*, Lat. *i-gnō-tus* ; *γυμνής* : *γυμνήτης* ; *μείραξ* : Skr. *maryakā-h*, *manikīn* ; &c.

-t-. It occurs especially in the formation of compound verbal adjectives and in masculine nouns, as *ἄ-γνώς*, *ἄ-δμής*, *δορι-κμής*, *προ-βλής*, *ὠμο-βρώς* ; *γυμνής*, *θής*, *κέλης*, *λέβης*, *πένης*, *χέρνης*, *πλώς*, *ἄναξ* ; *νύξ*. It occurs as a secondary suffix in *θέμις*, *χάρις* ; *γάλα* (*γάλακτος*), *μέλι* (*μέλιτος*).

-k-. It occurs in the formation of nouns, as *ἀλώπηξ*,

δέλφαξ, Ion. θώρηξ, ἵβυξ, κόραξ, λείμαξ, μεῖραξ, ψήληξ; βέμβηξ, πέροτιξ, cp. Lat. *cornix*, *rādix*, &c.

-d-. It occurs especially in the formation of nouns and adjectives in -άς, gen. -άδος, and in nouns in -ις, gen. -ιδος, as γενειάς, δρομάς, κεμάς, λαμπάς, νιφάς, πελειάς; μιγάς, νομάς, τεφράς, τοκάς, φυγάς; άσπίς, γλυφίς, δαῖς, ἐπιγουνίς, ἔρις (acc. ἔριν), κάλπις (acc. κάλπιν), κληίς, ληίς, ὄπις, cp. Lat. *lapis*, gen. *lapidis*; ἑμύς, πηλαμύς.

-g-. It occurs especially in the combination -γγ- in diminutives and in nouns denoting a hollow or a musical instrument, as κύστιγξ, λαῖγξ, λάρυγξ, ραθάμιγξ, σάλπιγξ, σήραγξ, σπήλυγξ, στόρθυγξ, σῦριγξ, φάλαγξ, φάραγξ, φάρυγξ (gen. φάρυγος), φόρμιγξ, ψάλλιγξ. κόκκυξ, λάταξ, μάστιξ, πέμφιξ, πτέρυξ, τέττιξ.

§ 286. For the formation and inflexion of nouns belonging to the r : n-declension see § 371.

4. THE FORMATION OF COMPOUND NOUNS AND ADJECTIVES.

§ 287. Most of the Greek compound nouns and adjectives consist of the compounding of two words each of which had an independent existence in the historic period of the language. The number of compounds, in which the first or last member or both members did not exist as independent words, was comparatively small, as in compounds like ἄ-θεος, ἀν-όμοιος where ἄ-, ἀν- (= Indg. *ǵ-*, Skr. *a-*, *an-*, Lat. *in-*, English *un-*) is the weak grade of the prim. Indg. negative particle **ne*, *not*; ἄ-παξ, ἀ-πλόος where ἄ- = Skr. *sa-*, Indg. **sm-* the weak grade of **sem-*, *one*; δά-πεδον where δα- = Indg. **dm-* the weak grade of *δομ-* in *δόμος*; ἑκατόμ-βη : βούς; νεο-χμός : χθών; ἔν-δον with -δον from **δομ* in *δόμος*; πέρ-υσι where the -υσ- in -υσι from older -υτ-ι is the weak grade of *φέτος*; τρά-πεζα where τρα- is the weak grade of *τετρα-*, *four*, and -πεζα from **pedja* : πούς; ἄριστον from **ἀjερι*, *in the morning*, and **στον* from

*-δτον, the participle to ἔδω; Ion. σήμερον, Att. τήμερον from *κῃ̄μερον (§ 129, 7) : *κιο-, *this*, and ἡμέρᾱ.

§ 288. The compounds may be conveniently divided into four classes. In Class I the first member was the stem of a declinable noun, adjective or pronoun, or an indeclinable numeral. In Class II the first member was an indeclinable particle which only occurred in compounds already in the parent Indg. language. In Class III the first member was an original adverb which also existed as an independent word. In Class IV the first member was a case-form or a form which came to be used as an adverb in Greek.

CLASS I.

§ 289. To this class belongs a very large number of compound nouns and adjectives. In such compounds the first member consists merely of the stem. This mode of forming compounds goes back to the prim. Indg. period and arose before the so-called case-endings came into existence. Regular forms were: ἀκρό-πολις, αὐτό-ματος, λογο-γράφος, ἵππο-μαχίᾱ, ἵππο-πόταμος, μονο-γενής, ταυρο-φόνος; ἀγγελιᾱ-φόρος, βουλη-φόρος, μοιρη-γενής; μαντι-πόλος, πτολί-πορθος, τρί-πους; ἀστυ-νόμος, ἡδυ-(φ)επής, πολυ-ανθής, ὦκυ-πέτης; σύ-αγρος; βου-νόμος, βού-παις, ναύ-αρχος, ναυ-πηγός, ναυ-κράτης; ἀρρεν-ωπός, τεκτόν-αρχος, κυν-ῶπις, ὀνομά-κλυτος, πάντ-αρχος; ἀνδρ-αχθής, πατρ-άδελφος; νυκτ-αίετος, ὀρνίθ-αρχος, ποδ-άρκης, πυγ-μάχος; ἐπεσ-βόλος, σακεσ-φόρος, κερασ-βόλος, σελασ-φόρος, μῦσ-φόνος, ἑωσ-φόρος. After the analogy of the o-stems the -ο- became extended to all kinds of stems, as ἡμερο-δρόμος, Νικό-μαχος, ὕλο-τόμος, ψῦχο-πομπός; φυσιο-λόγος; ἰχθυο-φάγος, συο-κτόνος; βο-ό-κλεψς; ἀγανο-θέτης, ἀκμό-θετον, ἀρρενό-παις, κυνο-κέφαλος, φρενο-μανής, αἰμο-βαφής, σωματο-ειδής, παντό-σεμνος; αἰθρό-τοκος, ἀνδρο-φάγος, ἄστερο-ειδής, πατρο-φόνος, ῥητορο-διδάσκαλος; αἰγό-βοτος, ἀσπιδο-πηγός, νιφό-βολος, ὀρνίθο-σκόπος, παιδο-φόνος;

ἐπο-ποιός, εἶρο-κόμος. The -ā-, -η- of the ā-stems was often extended analogically to other stems, especially for metrical purposes in poetry, as ἀκρά-χολος, θανατη-φόρος, νεᾶ-γενής; βο-η-νόμος; ἀσπιδη-φόρος, &c. Regular forms were τετρά-πους, ἐπτά-πους, δεκά-πους, after the analogy of which were formed πεντά-πους, ἑξά-πους, &c. Regularly contracted forms were Dor. στρατᾱγός, κρατερῶνυξ, φιλήρετμος, ὤμη-στής, &c., after the analogy of which were formed κυν-ᾱγός, αἰγ-ῶνυξ, πολυ-ωφελής, βο-ηλασίᾱ, παν-ήγυρις, &c.

The adjectives in -ρο- have -ι- in compounds, as ἀργι-κέραυνος : ἀργός from *ἀργρος, κῦδι-άνειρα : κῦδρός, λαθι-κήδης : λάθρη, χαλί-φρων : χαλαρός. This formation has never been satisfactorily explained, see Hirt, *Handbuch der griech. Laut- und Formenlehre*, p. 328.

There are numerous Greek compounds in which the first member was either verbal or came to be felt as being verbal, as ἀρχέ-κακος, δακέ-θῦμος, ταλα-πενθής, φερέ-καρπος; ἀρκεσί-γυις, λῦσί-πονος, τανυσί-πτερος, τερψί-μβροτος, φῦσί-ζοος. These latter formations came to be associated with the s-aorist and then became productive, as φθεισί-μβροτος : ἔφθαισα.

CLASS II.

§ 290. In this class the first member was an indeclinable particle which only occurred in compounds already in the parent Indg. language, as ἄ-, ἀν- (Skr. a-, an-, Lat. in-, Engl. un-) the weak grade of Indg. *ne, not (§ 65, 1), cp. ἄ-γνωτος (Skr. á-jñātaḥ), ἄ-θεος, ἄ-τίμος, ἄ-παις, ἄν-υδρος (Skr. an-udrāḥ), ἀν-αίτιος, ἀν-όμοιος. ἀ- (Skr. sa-) = Indg. *sm̐ the weak grade of *sem-, one, cp. ἄ-παξ, ἀ-πλός. δυσ- (Skr. dur-), cp. δυσ-αλγής, δύσ-θῦμος, δυσ-μενής (Skr. dur-manāḥ), δυσ-μήτηρ, δυσ-τυχής, δύσ-φατος.

CLASS III.

§ 291. In this class the first member was an original adverb which also existed as an independent word, as

ἀμφι-δέξις, ἀμφί-πολος, ἀνά-λογος, ἀνά-μεσος, ἀπό-τις, ἀπό-φονος, ἐκ-γενής, ἔκ-νομος, ἐπί-γαιος, ἐπί-θετος (Skr. *āpi-hitah*), ἐπί-χαλκος, κατὰ-χρῦσος, παρά-λογος, παρα-χρήμα, προ-ηγεμών, πρό-κακος, προσ-έσπερος, πρόσ-ωπον, σύν-δουλος, σύν-τρεϊς, ὑπερ-άνθρωπος, ὑπερ-δέξις, ὑπαρχος, ὑπό-θεσις (Skr. *ūpa-hitiḥ*), ὑπό-θετος, ὑπό-ξυλος.

CLASS IV.

§ 292. In this class the first member was a case-form or a form which came to be used as an adverb in Greek, as δώ-δεκα (Skr. *dvā-daśa*), Νεά-πολις; νουν-εχής, παν-ἡμαρ; Διός-δοτος, Διός-κουροι, κυνός-ουρα, νεώσ-οικος, Πέλοπόν-νησος from Πέλοπος νῆσος; Ἀρήϊ-φίλος, δορί-πονος, ἐαρί-δρεπτος, μεσαι-πόλιος, ὁδοι-πόρος, ὄρει-βάτης, πυρί-καυστος; δακρυσί-στακτος, ναυσι-κλυτός, ὀρεσσι-γενής, πᾶσι-φίλος. ἄμα-τροχιᾶ, παλαί-φατος, παν-αίολος, χαμαι-γενής.

ACCIDENCE

CHAPTER IX

DECLENSION OF NOUNS

§ 293. In the parent Indg. language nouns and adjectives were declined alike without any distinction in endings. This system was preserved in Greek, Latin, Sanskrit and most of the other languages. They are divided into two great classes according as the stem ends in a vowel or a consonant. In the former case they belong to the vocalic and in the latter to the consonantal declension.

§ 294. Nouns had originally three numbers: singular, dual and plural. The singular and plural were used in the same manner as in the historic periods of the separate languages. The dual is in form a singular, the formative elements of which originally expressed the idea of what belonged naturally together in a pair or couple, as ὀφθαλμός, ὄμματα, ὄσσε, Skr. *akṣī*, both eyes; χεῖρε, Skr. *hástāu*, both hands; πῆχεε, Skr. *bāhū*, both arms; πόδε, Skr. *pādāu*, both feet; and similarly μηρώ, ὄμω, &c. It then came to be used for two objects which were associated together, as Hom. βόε, Skr. *gāvāu*, a yoke of oxen; Hom. ἵππω, Skr. *áśvā*, a pair of horses; Hom. ἄρνε, a pair of lambs for sacrifice; τὼ θεῶ, the two goddesses (Demeter and Persephone); τὼ ταμίᾳ, the two treasurers (of Demeter and Persephone). When two different objects were associated together only the first of them was named and put in the dual. This is called the elliptical dual, as Skr. *uśāsā*, morning and night; *áhanī*, day and night; *dyāvā*, heaven and earth; *pitārāu*, father and mother, parents; Hom.

Αἶαντε, *Ajax and Teukros*. In prim. Indo-Germanic the words for *both* (Skr. *ubhāu*, ἄμφω, Lat. *ambo*) and *two* (Skr. *dvāu*, δύο, δύο, Lat. *duo*) were also used along with the dual, the former to express collectivity and the latter separate objects or two out of many, i. e. plurality. At a later stage these two words came to be regarded as expressing the duality and then the noun was often put in the plural. This was the beginning of the loss of the dual in the separate languages. In Greek and Vedic the dual was rarely used without the word for *two* except when the objects referred to were regarded as a pair or couple. But even in prim. Indo-Germanic the dual was not a fully developed number like the singular and plural. Each of the latter numbers had many more case-forms than the dual. The dual had only one form for the nom. voc. and acc. masculine and feminine, one for the nom. voc. and acc. neuter, one for the dat. abl. and instr. all genders, and similarly one for the gen. and one for the locative. It was preserved in Aryan, Greek, Old Irish and also to a great extent in Baltic-Slavonic, but it disappeared almost entirely in the prehistoric period of all the other languages. The dual was fast becoming obsolescent in the oldest historic period of the Greek language. In Homer objects which go in pairs or couples were expressed more frequently by the plural than the dual, and it is remarkable that the word for *parents* is only used once by him in the dual—ἀτὰρ οὐ τί μοι αἴτιος ἄλλος, ἀλλὰ τοκῆε δύο, τὸ μὴ γείνασθαι ὄφελον, θ 312. In some dialects the dual is not found at all. It occurs in Boeotian, Arcadian and also occasionally in Doric. It survived longest in Attic, in the oldest period of which it was used almost in the same manner as in Homer. After it had become obsolete in the Attic vernacular it was later restored again artificially in literature. By about the end of the fourth century B.C. it had disappeared in the vernacular of all the Greek dialects.

§ 295. It is now a generally accepted theory that nouns had the three genders—masculine, feminine and neuter—at the time the parent Indg. language became differentiated into the separate branches of Aryan, Greek, Italic, Keltic, Germanic, Baltic-Slavonic, &c. But in an earlier period of the parent Indg. language there must have been a stage when there was no characteristic inherent in the form of a noun which indicated whether it belonged to the masculine, feminine or neuter gender ; compare for example the *r*-, *n*- and other consonantal-stems in Greek, Latin and Sanskrit. In the consonantal declension nouns denoting males must originally have been masculine and those denoting females must have been feminine, irrespective of their form. But the exact process whereby inanimate objects came to be masculine or feminine in this declension will probably always remain an unsolved problem. And these remarks also apply to the *ī*-, *ū*- and diphthongal-declensions. In all these classes of nouns the gender could not be determined by the form, but only by the meaning or by an accompanying attribute such as a demonstrative pronoun, which in the earliest period of the Indg. language had distinctive forms for the masculine, feminine and neuter gender ; cp. Indg. **so*, **sā*, **tod* = *ó*, *ή*, *τό*, Skr. *sá*, *sā́*, *tát*, Goth. *sa*, *sō*, *pat-a*. Even in the *ā*-declension the *-ā* of the nominative had originally nothing to do either with gender or case, it was simply the bare stem-ending of a dissyllabic heavy base. It is probable that in this declension a certain number of nouns ending in *-ā* originally denoted females, as Vedic *ganā́*, *wife of a god*, Boeot. *βανά*, Att. *γυνή*, *woman*, and that then by analogy all nouns ending in *-ā* became feminine. The dem. pronoun may also have been an important factor in bringing it about that all nouns belonging to this declension became feminine. The Greek, Latin and Baltic-Slavonic masculines belonging to this declension were all nouns which had changed their gender

in these languages separately (§ 323). After the *ā*-declension had become fully established as being the only declension which contained exclusively feminine nouns, it then came to be regarded as specially characteristic of the feminine gender in general. And from this declension or rather a sub-division of it (§ 322) there was formed the grammatical feminine to those classes of nouns which did not originally distinguish the masculine and feminine in form, viz. the *i*-, *u*-, *r*-, *n*-, *nt*-, *-s*- and other consonantal-stems. And it even sometimes was used to form the feminine from *o*-stems, cp. Skr. *vṛkī*, *she-wolf*, *dēvī*, *goddess* : to the masculine *vṛkaḥ*, *dēvaḥ* beside *āśvā*, *mare*, masculine *āśvaḥ*. And in like manner, apart from the neuter nouns about which we shall speak presently, it is also probable that a certain number of nouns whose stems ended in *-o* originally denoted males, as Skr. *āśvaḥ*, Lat. *equus*, *horse* ; *λύκος*, Skr. *vṛkaḥ*, Lat. *lupus*, Goth. *wulfs*, Lith. *vilkas*, *he-wolf*, and that then by analogy all nouns whose stems ended in *-o* became masculine. See § 324. By comparing the oldest periods of the separate languages, it is clear that this development of grammatical gender in the *ā*- and *o*-declensions must have taken place during the prim. Indg. period. Through causes which it is now impossible to determine grammatical gender was further developed during this period whereby *ī*- and *ū*-stems, monosyllabic abstract nouns, abstract nouns with the stem-endings *-ti*, *-ni*, *-den*, *-don*, *-(i)jōn*, *-in*, *-t*, *-tāt* and *-tūt* all became feminine ; and abstract nouns with the stem-endings *-tu*, *-nu* and nouns with the stem-endings *-en*, *-on* denoting parts of the body, all became masculine (Brugmann, *Grundriss*, &c., vol. ii, part 2, second ed., pp. 99-101). From the above account of the masculine and feminine genders we have generally left out of consideration the change of gender which took place in the individual languages, such as that in Greek and Latin

grammatical gender sometimes became subordinate to natural gender, as ἡ ἀνθρωπος, ἡ θεός, *haec lupus* after the analogy of nouns like ἡ γυνή, *haec fēmina*; or that in Greek and the Germanic languages natural gender often became subordinate to grammatical gender, as in words like ἡ δάμαρ, ἡ ὄαρ, in diminutives like γύναιον, πατρίδιον, παιδίον, or in OE. neuters like *cild, child*; *folc, folk*; *hors, horse*; *lamb, lamb*; *wif, wife*; or that *o*-stems denoting the names of trees are feminine in Greek and Latin and the names of rivers masculine, whereas in the Germanic and several other languages the latter are mostly feminine.

The neuter gender differed from the masculine and feminine insomuch that it only had one form for the nominative and accusative singular. As we have seen above, there was originally no characteristic inherent in the form of a noun to indicate whether it belonged to the masculine, feminine or neuter gender. The grammatical neuter gender, as such, only came into existence after the masculine and feminine had become fully established. In its earliest stage it was only used to represent inanimate objects and these only in the nominative and accusative singular, for which the bare stem was used in the *i*-, *u*- and all consonantal-stems, and the accusative in the *o*-stems. The other cases of the singular were formed at a later period after the analogy of the masculines. The *i*-, *u*- and consonantal-stems mostly denoted the names of material, inert mass, or substance of being or action. The form in *-om*, as compared with the masculine nominative in *-os*, expressed the passive or inactive recipient, that is the accusative, which practically agrees with the meanings of the former classes of nouns. But as in the *i*-, *u*- and consonantal-stems there was no distinction in form between the nominative and accusative, the accusative in *-om* also came to be used for the nominative. Here as in the mas-

culines and feminines natural gender was often made subordinate to the grammatical gender in the individual languages, cp. ἡ δάμαρ, τὸ γύναιον or OE. *wif, wife, cild, child*.

What is called the neuter plural in the oldest periods of the separate Indg. languages was originally a feminine collective singular. This applies not only to the *o*-stems (§ 326) but also to the *i*-, *u*- and consonantal-stems. The nominative and accusative ending *-ā* of the *o*-stems agrees with the nominative singular ending of the *ā*-stems. *-ə* (Skr. *-i*, Gr. *-α*), the ending of the nominative and accusative of the consonantal stems, was in all probability the weak grade ablaut of the above *-ā*. The nominative and accusative endings of the *i*- and *u*-stems were *-ī* and *-ū*, which may also be a contraction of *-i*, *-u* + *ə*. The *-ī* however can also be the *-ī* of the nominative singular of the *jā*-stems (§ 322). During the prim. Indg. period these feminine collective singulars ceased to be felt as such and came to be regarded as plurals, and then the other cases of the plural were formed after the analogy of the masculines just as had previously been done in the singular. This accounts for the fact that in Greek and Sanskrit the nominative plural takes the verb in the singular, see § 326.

§ 296. The parent Indg. language had at least eight cases—probably more—if we call the vocative a case, which strictly speaking it is not because it does not stand in any syntactical relation to the other members of the sentence. These were: the Nominative, Vocative, Accusative, Genitive, Ablative, Dative, Locative and Instrumental, all of which were preserved in Sanskrit. The original functions and uses of these cases belong to comparative syntax. Of the origin of the case-endings practically nothing is known. Although much has been written upon the subject, it is all mere guess-work without any solid foundation. It is reasonable to suppose that the

case-endings were originally independent words, but what their precise meaning was in each particular case it is impossible to determine. It is remarkable that Greek, which in other respects is so archaic, should have lost so many of the original case-forms. In the following brief description of the formation of the case-endings in the parent Indg. language many details are omitted, especially such as relate to analogical formations in the individual languages. For details of this kind the student should consult the declensions themselves.

§ 297. In order not to have to repeat in each case the meanings of the Sanskrit, Gothic and Lithuanian words used to illustrate the various case-endings, a list of the words is given here for easy reference. Sanskrit: *agníḥ*, fire; *ákṣi*, eye; *áśvā*, mare; *áviḥ*, sheep; *bháran* (stem *bhárant-*, *bhárat-*), bearing; *bhūḥ*, earth; *dātā*, giver; *dāvānē*, to give; *dēví*, goddess; *dhārā*, stream; *dhíḥ*, thought; *durmanāḥ* (stem *durmanas-*), dispirited; *dyáuḥ*, sky, day; *gāuḥ*, cow, ox; *jánaḥ* (stem *jánas-*), race; loc. *mūrdhān*, on the head; *nadīḥ*, river; *nāma* (stem *nāman-*), name; *nāuḥ*, ship; *páśu*, cattle; *pāt* (stem *pād-*, *pad-*), foot; *pitā* (stem *pitár-*), father; *purú*, much, many; *rājā* (stem *rājan-*), king; *sūnúḥ*, son; *tanúḥ*, body; neut. *trí*, three; *vāri*, water; *vidmánē*, to know; *vṛkaḥ*, wolf; *yugám*, yoke. Gothic: *ansts*, favour; *baírand*s, bearing; *brōþar*, brother; *fadar*, father; *faíhu*, cattle; *giba*, gift; *guma*, man; *juk*, yoke; *mawi*, girl; *sunus*, son; *tuggō*, tongue; *wulfs*, wolf. Lithuanian: *avis*, sheep; *rankà*, hand; *vilkas*, wolf.

SINGULAR.

§ 298. The nominative of the masculine and feminine was formed in four ways. (a) In the *ā-* and *jā-*declensions by the bare stem without case-ending, as *χόρᾱ*; Skr. *áśvā*, Lat. *equa*, mare, Goth. *giba*, gift (§ 321); *-ī* beside *-(i)jə*,

the former occurs in Skr. *dēví*, goddess, Goth. *mawi*, girl, and the latter in *φέρουσα* from **φέροντια* (§ 322). (b) In the n-, r- and s-stems by simply lengthening the vowel of the stem-ending, as *ποιμήν*, *δαίμων*; Goth. *guma*, man, Skr. *rājā*, king, Lat. *homo*, *sermo*; Goth. *tuggō*, tongue (§ 345); *πατήρ*, Lat. *pater*, Goth. *fadar*, Skr. *pitā*, father (§ 360); *δότηρ*, Lat. *dator*, Skr. *dātā*, giver (§ 361); *δυσμενής*, hostile, Skr. *durmanāḥ*, dispirited (§ 366); *γέλως*, *αἰδώς* (§ 368). (c) The o-, i-, u-, ī- and ū-stems and also stems ending in an explosive (except monosyllabic or root nouns) had simply the case-ending -s, as *λύκος*, Skr. *vṛkaḥ*, Lat. *lupus*, Goth. *wulfs*, Lith. *vilkas*, wolf (§ 325); *πόλις*, *δῖς*, Skr. *āvih*, Lat. *ovis*, Lith. *avis*, sheep (§ 328); *πῆχυς*, arm, Skr. *sūnūḥ*, Goth. *sunus*, son, Lat. *fructus* (§ 331); *κῆς*, weevil, Skr. *dhīḥ*, thought (§ 330); *ἰχθύς*, fish, Skr. *tanūḥ*, body (§ 334); *φύλαξ*, *μάστιξ*, *κατῆλιψ*, *λαμπάς*, *κόρυς*, *νέοτης* from **νεφοτάς* (§§ 342-3); Skr. *bhāran* from **bhārants*, Lat. *ferēns*, Goth. *baírands*, bearing (§ 352); *διδούς* from **διδοντις*, and similarly *δαμνάς*, *δεικνύς*, *τιθείς*, &c. (§ 354); *χαρίεις* from **χαριφεντις* (§ 356). (d) The diphthongal stems and the monosyllabic consonantal stems had the case-ending -s and lengthening of the stem-ending, as *ναῦς*, Skr. *nāuḥ*, ship (§ 336); *Ζεύς*, cp. Skr. *dyāuḥ*, sky (§ 337); *βασιλεύς* (§ 338); *βοῦς*, Skr. *gāuḥ*, cow, ox (§ 339); *πούς*, Skr. *pāt*, Lat. *pēs*, OE. *fōt*, foot (§ 342).

§ 299. The vocative of the masculine and feminine had no special case-ending. In the ā- and o-declensions it ended respectively in -ā and -e which stood in ablaut relation to the -ā and -o of the nominative, as Hom. *νύμφᾱ*, *δέσποτᾱ* (§ 321); *λύκε*, Skr. *vṛka*, Lat. *lupe*, Goth. *wulf*, wolf (§ 325). The original ending of the i-stems was -i when the preceding syllable had the chief accent of the word, and -ei or -oi when the accent was on the ending. Greek and the Germanic languages generalized the former and Sanskrit the latter, as *πόλι*; Goth. *anst*, favour, beside

Skr. *ágnē* : nom. *agníḥ*, *fire* (§ 328). And similarly *-u* beside *-eu* or *-ou* in the *u*-declension, as *πῆχυ*, Goth. *sunu*, beside Skr. *súnō* (§ 331). The long *ī*- and *ū*-stems originally ended in *-i*, *-u* beside *-ī*, *-ū*, the former became generalized in Sanskrit and the latter in Greek, as Skr. *nádi* : nom. *nadíḥ*, *river*, *tánu* : nom. *tanúḥ*, *body*, *σῦ*, *ἰχθῦς*. In the monosyllabic *ī*-stems the nom. was used for the vocative in both languages, as *κίς*, *dhíḥ* (§ 330); and similarly with the monosyllabic *ū*-stems in Sanskrit, as *bhúḥ*, *earth* (§ 334). The diphthongal and the *n*-, *nt*-, *went*-, *r*- and *s*-stems had the bare stem-ending, as *βοῦ* (§ 339), *Zēu*, Lat. *Jū-piter* (§ 337), *βασιλεῦ* (§ 338); *δαίμον*, cp. Skr. *rājan* (§ 345); *γέρον*, cp. Skr. *bhāran* from **bhārant* (§ 352); *χαρίεν* from **χαριφεντ* (§ 356); *πάτερ*, Skr. *pítar* (§ 380), *δῶτορ*, Skr. *dātār* (§ 361); *δυσμενές*, Skr. *durmanah* (§ 366). The nominative was used for the vocative of stems ending in a simple explosive (§ 342).

§ 300. The case-ending of the masculine and feminine accusative was *-m* or *-ṃ* (= *a*, Skr. *-a*, Lat. *-em*, § 65, 1) according as the stem ended in a vowel or a consonant, as *χώρᾱν*, Skr. *áśvām*, Lat. *equam*, Goth. *giba*; *λύκον*, Skr. *vṛkām*, Lat. *lupum*; *πόλιν*, cp. Skr. *agním*, *fire*, Lat. *sitim*, *partim*; *πῆχυν*, cp. Skr. *súnúm*, Lat. *fructum*; *Zḗν*, cp. Skr. *dyām*, *sky*, from **djé(u)m*; *βῶν*, Skr. *gām*, *cow*, *ox*, from **gō(u)m*; the long *ī*- and *ū*-stems had *-īm*, *-ūm* beside *-ijm*, *-uwm*, as *κῖν*, *ἰχθύς*, Skr. *dhíyam*, *tanúvam*; Hom. *νῆα*, Skr. *nāvam*, Lat. *nāvem*, *ship*, from **nāwm*; *βασιλῆα*, *-έα*, from **-ηφα*; *πόδα*, Skr. *pādam*, Lat. *pedem*; *ποιμένα*, *δαίμονα*, Skr. *rājānam*; *φέροντα*, Skr. *bhārantam*, Lat. *ferentem*; *χαρίεντα* from **χαριφεντα*; *πατέρα*, Skr. *pítāram*, Lat. *patrem*; *δῶτορα*, Skr. *dātāram*, Lat. *datōrem*; *δυσμενέα*, *-ῆ*, Skr. *durmanasam*; *αἰδῶ* from **αἰδοσα*. The Sanskrit ending *-am* of the consonantal stems had the *-m* from the accusative of the vocalic

stems; and similarly *-av* for *-a* in the Cyprian dialect and also occasionally in other dialects.

§ 301. The case-ending of the nom. voc. and acc. neuter was *-m* in the *o*-declension, as *ζυγόν*, Skr. *yugám*, Lat. *jugum*, *yoke* (§ 326). All other neuters had the bare stem-ending, as *ἵδρι*, cp. Skr. *vári*, *water*; *ἄστν*, *ἡδύ*, cp. Skr. *páśu*, Lat. *pecu*, Goth. *faíhu*, *cattle*; *κῆρ*, *γάλα*, *μέλι*, from **κηρδ*, **γαλακτ*, **μελιτ*; *ὄνομα*, Skr. *nāma*, Lat. *nōmen*, *name*; *φέρων* from **φεροντ*, cp. Skr. *bhārat* (§ 353), *bearing*; and similarly *δαμνάν*, *δεικνόν*, *τιθέν*, &c., *χαρίεν*; *άπάτορ*; *γένος*, Skr. *jánaḥ*, Lat. *genus*, *race*; *δυσμενές*, Skr. *durmanah*.

§ 302. The original genitive case-ending was *-es*, *-os* and *-s*, which stand in ablaut relation to each other. *-s* occurred after vowels and *-es*, *-os* after consonants. *-es* was originally used when it had the chief accent of the word, and *-os* when the accent preceded the case-ending. Latin generalized the former and Greek the latter. It cannot be determined whether the Sanskrit ending *-aḥ* represents *-es* or *-os* because *e* and *o* regularly fell together in *a*. Examples are: *χώρας*, *σκιᾶς*, *τῆμης*, cp. Skr. *áśvāy-āḥ*, *of a mare*, Goth. *gibōs*, *of a gift*, Lat. *familiās*, all from *-ās*; Skr. *agnēḥ*, *of fire*, Goth. *anstáis*, from *-eīs* or *-oīs*; Skr. *sūnōḥ*, Goth. *sunáus*, *of a son*, from *-eūs* or *-oūs*; on the Greek forms, see §§ 328, 331; *κίος* from **κίγος*, cp. Skr. *dhiyáḥ*; *ἰχθύος* from **ἰχθυφός*, cp. Skr. *tanúvāḥ*; Ion. *γουνός*, *δουρός* from **γουνφός*, **δορφός*, cp. Skr. *paśvāḥ*, *of cattle*; Ion. *νηός*, Att. *νεός*, Skr. *nāvāḥ*, Lat. *nāvis*; *Δίος*, Skr. *divāḥ*; *βοός*, Vedic *gávaḥ*; *ποδός*, Skr. *padāḥ*, Lat. *pedis*; *ποιμένος*, *δαίμονος*, cp. Skr. *rājñāḥ*; *φέροντος*, Skr. *bhārataḥ*, Lat. *ferentis*; *πατρός*, *δωτορος*, Lat. *patris*, *datōris*; *γένεος*, *γένους*, Skr. *jánasaḥ*, Lat. *generis*; *δυσμενέος*, *-οῦς*, Skr. *durmanasaḥ*; *αἰδοῦς* from **αἰδοσος*; *ἥπατος*.

The genitive of the *o*-stems was formed after the analogy

of the genitive of the demonstrative pronoun in prim. Indo-Germanic, cp. Hom. *λύκοιο* = Skr. *vṛkasya*, beside *τοῖο*, Skr. *tásya*, Indg. **tosjo*; and also prim. Greek **ῥλυκοσο* = Att. Ion. and mild Dor. *λύκου*, Boeot. Lesb. and severe Dor. *λύκω*, beside *τοῦ*, *τῶ* from Indg. **toso*.

§ 303. The ablative case-ending was originally the same as that of the genitive in all stems, but during the prim. Indg. period special case-endings for the ablative (-ēd, -ōd) and the genitive (-sjo) of the o-stems were formed after the analogy of the pronominal endings (§ 408). This ablative case-ending was preserved in Sanskrit and Old Latin, as *vṛkāt* : nom. *vṛkaḥ*, *yugāt* : nom. *yugám*, O. Lat. *Gnaivōd*, *meritōd*, inscrip. *facilumed* = *facillumēd*. But it disappeared in Greek except in isolated forms, as Delph. *φοῖκω*, *domo*, Cret. *τῶ-δε*, *hinc*, *ὧ*, *ὅπω*, *unde*. Its disappearance was doubtless due to the analogy of the other declensions in which the genitive and ablative were alike in form. The adverbial particle -*θεν*, which originally belonged to words like *πόθεν*, came to be used to express the ablative, as *οἴκοθεν*, *οὐρανόθεν*.

§ 304. The dative case-ending was originally -*ai* for all stems. In the *ā*- and *o*-declensions it became contracted in prim. Indo-Germanic with the stem-ending whereby -*ā* + *ai* became -*āi* and -*o* + *ai* became -*ōi*, as *χώρᾳ*, *τῇμῃ*, Skr. *áśvāy-āi*, Lat. *equae*, Goth. *gibái*; *θεῷ*, *λύκῳ*, Skr. *vṛkāy-a*, Lat. *lupō* (O. Lat. *populoi*). In the other stems the old dative was supplanted by the locative in Greek, but the original dative was preserved in isolated forms, such as inf. Att. *δοῦναι*, Cypr. *δοφεναι* = Skr. *dāvánē*, Hom. *ἰδμεναι* = Skr. *vidmánē*, adv. *χαμαί*, Lat. *humī*. It was regularly preserved in Sanskrit and Latin, as *agnáy-ē*, *hostī*; *sūn-ávē*, *fructuī*; *gávē*, *bovī*; *nāvé*, *nāvī*; *padé*, *pedī*; *rājñē*, *hominī*; *námnē*, *nōminī*; *bháratē*, *ferentī*; *pitré*, *dātré*, *patri*, *datōrī*; *jánasē*, *generī*.

§ 305. The locative case-ending was -*i* in the *ā*-, *o*-, *i*-, *ū*-

and consonantal-stems (but see below). In the *i*- and *u*-stems the locative ended in *-ēi* (*-ē*, § 63) and *-ēu* which were the lengthened form of the full stems. The *n*-, *r*- and *s*-stems had *-i* beside no special case-ending. Forms of the latter have only been preserved in isolated forms, as *αἶέν*, *αἶές*, inf. *δόμεν*, *ἴδμεν*; Skr. *mūrdhān*, *on the head*.

In the *ā*- and *o*-declensions the *-i* combined with the stem-endings to form the diphthongs *-āi* and *-oi*, *-ēi* beside *-oi* and *-ei*. The locative of the *ā*-declension thus fell together with the original dative. In Greek the locative of the *o*-declension only occurs in isolated forms. Examples are: *χώρα*, *θεᾶ*, *τιμῇ*, Lat. *Rōmae*, O.Lat. *Rōmai*; *Ἰσθμοῖ* and in adverbs like *ποῖ*, *πεῖ*, *ἐκεῖ* beside *οἴκοι*, *οἴκει*, cp. Skr. *vṛkē*, Lat. *belli*, *domi*. *κί* from **κίγ*, Skr. *dhiyí*; *ἰχθυῖ* from *ἰχθυφι*, Skr. *tanúvi*; Att. Ion. *νηῖ*, Skr. *nāví*, Lat. *nāve*; *βασίλῃ* from **βασίλῃφι*; *βοῖ*, Skr. *gávi*, Lat. *bove*; *ποδί*, Skr. *padí*, Lat. *pede*; *ποιμένι*, *δαίμονι*, Skr. *rājani*, Lat. *homine*; *φέροντι*, Skr. *bhárati*, Lat. *ferente*; *πατέρι*, Skr. *pitári*, Lat. *patre*; *γένει*, Skr. *jánasi*, Lat. *genere*; *δυσμενεῖ*, Skr. *durmanasi*; *αἰδοῖ* from **αἰδοσι*. The adverbial particle *-θι* also came to be used to express the locative, as *ἄλλοθι*, *οὐρανόθι*.

The locative of the *i*- and *u*-stems was remodelled in prim. Greek after the analogy of the consonantal and other stems where *-i* was regular (§§ 328, 331). The regular forms were preserved in Sanskrit, Latin and Gothic, as Vedic *agnā* (see above), Lat. *hosti*, Goth. *anstái*; Skr. *sūnáu*, Goth. *sunáu*, Lat. *senatū*, *fructū*. In the *i*-stems the dative and locative regularly fell together in Latin.

§ 306. The instrumental was not preserved in Greek except in isolated forms. It is doubtful what was its original ending in most of the stems, because there is no clear agreement in its formation among the languages which have an instrumental in historic times. In the *ā*-, *o*-, *i*- and *u*-declensions it ended in *-ā*, *-ō* (*-ē*), *-i* and *-ū*, as Vedic *áśvā*,

with a mare; dhārā, with the stream; κρυφή, λάθρα, -η; Vedic vṛkā, Goth. wulfa, Lith. vilkù, πώποτε, Hom. ἐπισχερώ, ἀμαρτή. In the other stems it probably ended in -a beside -bhi and -mi which resulted from the endings of three originally different cases being used for the instrumental. The -bhi is the same as the instrumental plural ending in Sanskrit -bhiḥ. In Greek it only occurs in the epic language of Homer and his imitators, and there mostly with the ā- and o-stems, rarely with other stems. In Homer it had more frequently a plural than a singular meaning, and it was used to express both the instrumental, ablative and locative, seldom the genitive and dative. The -mi occurs in the Baltic-Slavonic languages in the singular and the plural and in the Germanic languages only in the latter. The -a occurs in adverbs like ἄμα, παρά, πεδᾶ, and possibly also in the Latin consonantal stems, *homine*, *patre*, &c., but as the locative (-i) and instrumental (-a) endings regularly fell together, the -e can represent either case. Examples of -bhi are: ἀγέληφι, βίηφι(ν), κεφαλῇφι(ν); θεόφι(ν), ζυγόφι(ν), Ἰλιόφι(ν), ἴφι, ναῦφι(ν), ἐρέβεισφι, ὄρεσφι(ν). The -ν was of the same origin as in the locative plural (§ 316).

DUAL.

§ 307. For an account of the original case-forms and uses of the dual in the parent Indg. language see § 294.

§ 308. The nominative, vocative and accusative of the masculine and feminine was formed differently in the different stems. In the ā-stems the ending was -ai, as Skr. áśvē, on Gr. χώρα, τιμά, see § 321. In the o-stems it was -ōu beside -ō, Greek generalized the latter, as λύκω, Lith. vilkù, Vedic vṛkāu beside vṛkā. In Sanskrit the -āu, -ā was extended by analogy to the ī-, ū- and all consonantal stems. In the i- and u-stems it was -ī and -ū, as Skr. agnī, sūnū, on Gr. πόλεε, πόλει, see § 328, and on πήχεε, πήχει,

§ 331. In the *i*-, *ū*-, diphthongal and consonantal-stems Greek has *-ε* which seems to be the original case-ending in all these stems, but it is not certain because just as the *-āu*, *-ā* of the *o*-stems was extended by analogy to the *i*-, *ū*- and consonantal-stems in Sanskrit, so also the Greek *-ε* may be a new formation after the relation of the old nom. plural ending **-ωs* (§ 324) : to the nom. plural ending *-εs* so to the dual ending *-ω an* *-ε* may have been formed. Examples are : *κίε, ἰχθύε, νῆε, βόε, πόδε, ποιμένε, φέροντε, χαρίεντε, πατέρε, δυσμενέε, -εῖ*.

§ 309. The nominative, vocative and accusative neuter ending was *-oi* in the *o*-stems, as Vedic *yugē*, on Gr. *ζυγώ*, see § 326. In all the other stems the ending was probably *-ī*, which was supplanted by the *-ε* of the masculine and feminine in Greek, as Skr. *akṣī, nāmanī, jānasī = ὄσσε, ὀνόματε, γένεε*.

§ 310. It is impossible to determine what was the original case-ending of the genitive and locative in the various declensions because there is no agreement among the languages which have preserved the dual in historic times. Some scholars assume that it was *-oūs* = the Skr. *-ōḥ* in *āśvayōḥ, vṛkayōḥ, agnyōḥ, sūnōḥ, padōḥ, rājñōḥ, pitrōḥ*, &c. The dative, ablative and instrumental ending contained the element *-bh-* (Skr. *-bhyām*) beside *-m*, but what the Indg. vocalism was it is impossible to determine. In Greek Hom. *-οιιν*, Att. Ion. &c. *-οιν* became used in all stems except the *ā*-stems to express the functions of all the five cases. On the origin of *-οιιν*, *-οιν* and *-αιιν*, *-αιν*, see §§ 321, 325.

PLURAL.

§ 311. The separate languages show that the nominative was used for the vocative already in prim. Indo-Germanic. The original case-ending of the masculine and feminine nominative and vocative was *-es* in all stems. The *-es*

became contracted with the stem-endings of the *ā*- and *o*-stems in prim. Indg. whereby *-ā + es* became *-ās* and *-o + es* became *-ōs*, as Skr. *áśvāḥ*, Osc. *scriftas*, *scriptae*, Umbr. *urtas*, *ortae*, Goth. *gibōs*. Skr. *vṛkāḥ*, Goth. *wulfōs*, Osc. *Núvlanús*, *Nolani*. On the endings in Greek and Latin see §§ 321, 325. *πόλεις*, Skr. *agnáyaḥ*, Lat. *hostēs*, Goth. *ansteis*, all from *-ejes*; Ion. *πήχες*, Att. *πήχεις*, Skr. *sūnávaḥ*, from *-ewes*; *κίες*, Skr. *dhíyaḥ*, from *-ijes*; *ἰχθύες*, Skr. *tanúvaḥ*, from *-uwes*; Dor. *νᾶες*, Att. Ion. *νῆες*, Skr. *návaḥ*; *βόες*, Skr. *gávaḥ*; *πόδες*, Skr. *pádaḥ*; *ποιμένες*, Skr. *rājānaḥ*; *φέροντες*, Skr. *bhárantaḥ*; *πατέρες*, Skr. *pitáraḥ*; *δυσμενέες*, *-εῖς*, Skr. *durmanasaḥ*.

§ 312. The case-ending of the masculine and feminine accusative was *-ns* or *-ṅs* (= *-as*, Skr. *-aḥ*, Lat. *-ēs*, Goth. *-uns*) according as the stem ended in a vowel or a consonant, as Cret. *τῖμᾶνς*, Att. Ion. Dor. *τῖμᾶς*, Lat. *equās*; on the endings in Skr. *áśvāḥ* and Goth. *gibōs* see § 321; Cret. *λύκονς*, Att. Ion. and mild Dor. *-ous*, Boeot. and severe Dor. *-ως*, Lesb. *-οις*, Lat. *lupōs*, Goth. *wulfans*; Cret. *πόλινς*, Ion. *πόλινς*, Lat. *hostīs*, Goth. *anstins*; Cret. *νῖνς*, Goth. *sununs*, Lat. *fructūs*. *κίας*, Skr. *dhíyaḥ*; *ἰχθύας*, Skr. *tanúvaḥ*; Ion. *νῆας*, Skr. *návaḥ*, Lat. *nāvēs*; *βόας*, Lat. *bovēs*; *πόδας*, Skr. *padáḥ*, Lat. *pedēs*; *ποιμένας*, Skr. *rājñāḥ*, Lat. *hominēs*; *φέροντας*, Skr. *bhárataḥ*, Lat. *ferentēs*; *πατέρας*, Lat. *patrēs*, cp. Goth. *brōþrunς*, *brothers*; *δυσμενέας*, Skr. *durmanasaḥ*. The Cret. dialect had *-avs* after the analogy of the vocalic stems.

§ 313. The ending of the nominative, vocative and accusative neuter was *-ā* in the *o*-stems, *-ī* in the *i*-stems, *-ū* in the *u*-stems, and *ə* (= *-a*, Skr. *-i*) in the consonantal stems, see § 295. Vedic *yugā*, Lat. *juga*, Goth. *juka*, *yokes*, on *ζυγά*, see § 326; Vedic *trī*, *trīa*, on *τρία*, *ἰδρία*, see § 329; Vedic *purī*, *much*, *many*, on *ἄσση*, *ἡδέα*, see § 333. *ὀνόματα*, Skr. *nāmāni*; *φέροντα*, Skr. *bháranti*.

§ 314. The original genitive ending was probably **-ām**, a contraction of **-ā + ōm**, in the **ā**-stems, and **-ōm** (= **-ōn**, Skr. **-ām**, Lat. **-om**, **-um**) in all other stems. In prim. Greek and Latin the genitive of the **ā**-stems was remodelled after the analogy of the pronouns, cp. Hom. **τάων** from ***τάσων**, Skr. **tāsām**, Lat. **is-tārum**, Indg. ***tāsōm**, whence Hom. (Aeolic) **θεάων**, Boeot. **-άων**, Ion. **-έων** from older **-ήων**, Att. **-ῶν**, Dor. **-ᾶν** Lesb. **-ᾶν**, Lat. **equārum**. **λύκων**, **θεῶν**, O.Lat. **Rōmānom**, **deum**, class. Lat. **lupōrum** with pronominal ending; **πολίων**, **τριῶν**, Lat. **hostium**, **trium**; Lat. **fructuom**, **-uum**, **-um**, on **πήχεων**, see § 331; **κιῶν**, Skr. **dhīyām**; **ἰχθύων**; Hom. **νηῶν**, Skr. **nāvām**; **βοῶν**, Skr. **gāvām**, Lat. **bovom**, **boum**; **ποδῶν**, Skr. **padām**, Lat. **pedum**; **ποιμένων**, Skr. **rājñām**, Lat. **hominum**; **φερόντων**, Skr. **bhāratām**; **πατρῶν**, Lat. **patrum**; **γενέων**, **γενῶν**, Skr. **jānasām**, Lat. **generum**; **δυσμενέων**, **-ῶν**, Skr. **durmanasām**.

§ 315. The dative and ablative ending contained the element **-bh** (Skr. **-bhyah**, Lat. **-bos**, **-bus**) beside **-m**, but it is uncertain what was the Indg. vocalism.

§ 316. It is doubtful what was the original case-ending of the locative. Sanskrit and Lithuanian (dial.) has **-su** and Old Slavonic **-chŭ** = **su**. Greek has **-si**. Most scholars assume that **-su** is the original ending and that **-si** was a new formation with the substitution of **-i** for **-u** after the analogy of the **-i** of the locative singular. It is however possible that the original ending was simply **-s** and that **-u** and **-i** were deictic locative particles, the latter of which became generalized in Greek and the former in the other languages. In the vocalic and **n**- and **r**-stems the intervocalic **-s** would regularly have disappeared in Greek (§ 213, 2), but it was restored again after the analogy of stems ending in an explosive or **-s**, as in **ποσσί**, **ποσί**, Skr. **patsú**, **φύλαξι**, **φλεψί**, **γένεσσι**, **γένεσι**, Skr. **jānahsu**. Such new formations are: **θύρᾱσι** (§ 321), Skr. **áśvāsu**;

λύκοιςι, Skr. *vḥkēṣu*; *τρισί*, Skr. *triṣú*; *πήχεσι*, Skr. *sūnūṣu*; *κισί*, Skr. *dhīṣú*; *ἰχθύσι*, Skr. *tanūṣu*; *ναυσί*, Skr. *nāuṣú*; *βουσί*, Skr. *gōṣu*; *ποιμέσι*, Skr. *rājasu*; *πατράσι*, Skr. *pitṛṣu*. In the Aeolic dialect including Homer the ending *-εσσι* later *-εσι* of the *s*-stems was extended by analogy to all stems except the *ā*-, *jā*- and *o*-stems, as *πολίεσσι*, *ταχέεσσι*, *σνέεσσι*, *νηέσσι*, *βούεσσι*, *βασιλῆεσσι*, *ποδέσσι*, *ἀγώνεσσι*, *πάντεσσι*, *ἀνδρεσσι*, *θυγατέρεσσι*. The ending *-σιν* had its *-ν* from pronouns like *ἡμίν*, *ἡμῖν*, Lesb. *ἄμμι(ν)*; *ὑμίν*, *ὑμῖν*, Lesb. *ῥμμι(ν)*.

§ 317. The case-ending of the instrumental was *-bhis* (Skr. *-bhiḥ*) beside *-mīs* except in the *o*-stems which had *-ōīs*, as *θεοῖς*, *λύκοις*, Skr. *vḥkāiḥ*, Lat. *iupīs*, Lith. *vilkaiš*. On the *-bh*- and *-m*- forms, see the instrumental singular (§ 306). And on *χώραις*, *σκιαῖς*, see § 321.

§ 318. Few Indg. languages preserved the eight cases described in the foregoing paragraphs. They were all preserved in Sanskrit as also in the Baltic-Slavonic languages with the exception of the ablative. Through syncretism it arose in Greek that in the place of several case-forms with different meanings one case-form became used which united the functions of these. Thus the case which we call the dative in Greek grammar embraces both a dative, locative and instrumental meaning. But the dative forms of Greek grammar were originally partly old dative forms as *λύκῳ*, partly locative forms, as *ποδί*, *ποσί*, and partly instrumental forms as *λύκοις*. Hence it arose in Greek that certain dative forms had at the same time the functions of the locative and instrumental; certain locative forms at the same time the functions of the dative and instrumental; and certain instrumental forms at the same time the functions of the dative and locative. Also what is called the genitive and dative dual in Greek grammar was used to express the functions of both the genitive, locative, dative, ablative, and instrumental. By syncretism it also

arose in Greek that the genitive acquired both the functions of the old genitive and ablative. And similarly the case, which we call the ablative singular in Latin grammar, embraces both an ablative, locative and instrumental meaning. But the Latin ablative forms were originally partly old ablative forms, as *equō(d)*, and partly old locative and instrumental forms, as *pede*, *patre*, *homine*. And in like manner what is called the dative singular in Gothic is originally the instrumental in the *a*- and masculine *i*-stems, the locative in the feminine *i*-, the *u*-, and all consonantal-stems; and the dative only in the *ō*-stems. And what is called the dative plural is in form the instrumental.

§ 319. In the declension of nouns and adjectives it is not only necessary to take into consideration the case-endings, but also the stem-endings which often formed an important factor especially in the declension of the *i*-, *u*- and diphthongal stems as well as in most of the consonantal stems. These classes of nouns and adjectives originally contained various grades of ablaut either in the root-syllable, as in the monosyllabic consonantal stems and in some of the diphthongal stems, which contained no suffix or formative element, cp. *πῶς*, Lat. *pēs* : *ποδ*-, *ped*- (§ 342); nom. **djéus*, *Ζεύς* : loc. **djéwi*, Vedic *dyávi* : gen. **diwós*, Skr. *diváh* (§ 337); or in the stem-ending, as in the *i*-, *u*-, *n*-, *r*- and *s*-stems, cp. nom. sing. *-i-s*, *-u-s* : nom. pl. *-ej-es*, *-ew-es* : loc. sing. *-ēi*, *-ei*, *-ēu*, *-eu* (§§ 328, 331); *ποι-μέν-α* : **ποι-μν-os*, **ποι-μα-σι* (§ 345); *πα-τήρ* : *πα-τέρ-α* : *πα-τρ-ός*, *πα-τρ-ά-σι* (§ 360); *γένος*, Hom. *ιδρόα* from **ιδρόσ-α* : *γένεσ-* : *ιδρώς*. According as the stem-ending in the diphthongal and consonantal stems originally contained the strong or weak grade of ablaut, the various cases are divided into strong or weak case-forms. The strong case-forms were: the nominative, vocative and accusative singular and dual, the locative singular and nominative plural, and possibly also the accusative plural (§ 345).

All the rest were weak case-forms. This original distinction between strong and weak case-forms was most faithfully preserved in Sanskrit, but in most of the other Indg. languages it became considerably obliterated through new formations caused by levelling out one or other of the stem-forms, cp. the *n*-declension in Greek (§ 345).

A. THE VOCALIC DECLENSION

I. THE *ā*-DECLENSION.

§ 320. The *ā*-declension originally contained only feminine nouns as in Sanskrit and the Germanic languages, but in Greek, Latin and the Baltic-Slavonic languages a certain number of original abstract nouns acquired a concrete meaning and then became masculine (§ 323). The *ā*-declension is divided into *ā*-stems and *jā*-stems. On the change of *ā* to *ē* in Attic and Ionic see § 51.

§ 321.

a. FEMININE *ā*-STEMS.

| | Indg. | <i>Singular.</i> | | | |
|----------------|---------------------|------------------|--------|--------|--|
| Nom. | - <i>ā</i> | χώρᾱ | σκιᾶ | τίμη | |
| Voc. | - <i>ᾶ</i> | χώρᾶ | σκιᾶ | τίμή | |
| Acc. | - <i>ām</i> | χώρᾱν | σκιᾶν | τίμην | |
| Gen. | - <i>ās</i> | χώρᾶς | σκιᾶς | τίμης | |
| Dat. | - <i>ai</i> | χώρᾱι | σκιᾷ | τίμῃ | |
| <i>Dual.</i> | | | | | |
| Nom. Voc. Acc. | - <i>ai</i> | χώρᾶ | σκιᾶ | τίμᾶ | |
| Gen. Dat. | -? | χώραιν | σκιαιν | τίμαйн | |
| <i>Plural.</i> | | | | | |
| Nom. Voc. | - <i>ās</i> | χώραι | σκιαι | τίμαί | |
| Acc. | - <i>āns</i> | χώρᾶς | σκιᾶς | τίμᾶς | |
| Gen. | - <i>ām</i> | χωρῶν | σκιῶν | τίμῶν | |
| Dat. | - <i>asu</i> (loc.) | χώραις | σκιαῖς | τίμαῖς | |

Singular: The *-ā, -η* corresponds to the nom. endings in Skr. *áśvā*, *mare*, Lat. *equa*; Goth. *giba*, *gift*, Lith. *rankà*, O.Slav. *řaka*, *hand*, with regular shortening of the *-ā* in all these languages except Sanskrit.

-ā, the original voc. ending was preserved in Homeric *νύμφα* and in Homeric masculines like *ἄττα*, *πάππα*, *συβῶτα*, Att. *δέσποτα*, *τοξότα*, *Πέρσα*, and in O.Slav. *řako* beside nom. *řaka*. In Greek and Goth. the nom. came to be used for the voc. already in the prehistoric period of these languages, probably owing to the fact that these two cases were alike in the plural in the parent Indg. language. The regular voc. would have been **gif* in Gothic. As final Indg. *-ā* and *-a* regularly fell together in Lat. and Lith. it cannot be determined whether *equa*, *rankà* represent the original voc. or whether they are the nom. used for the vocative.

The *-āν, -ην* (§ 141) regularly corresponds to the acc. endings in Skr. *áśvām*, Lat. *equam*, Goth. *giba*, Lith. *rañkà*, O.Slav. *řakà*.

The *-ās, -ās, -ῆς* regularly corresponds to the gen. endings in Skr. *áśvāy-āḥ*, O.Lat. *familiās*, *fortunās*, *viās*, &c., Goth. *gibōs*, Lith. *rañkos*; Arcad. *γαῦ*, *ζαμίαν*, *οικίαν*, &c., beside *-ās, -ās*, with *-āν* from the masc. *ā*-stems (§ 323).

The *-α, -ᾱ, -ῆ* = Indg. *-āi* and the dat. endings in Skr. *áśvāy-āi*, Lat. *equae*, Goth. *gibái*, Lith. *rañkai*.

By contraction of the original case-endings with the stem-vowel, the dat. (*-ā + ai*) and loc. (*-ā + i*) fell together in *-āi* in the parent Indg. language (§ 79). The long diphthong *-āi* was shortened to *-ai* before consonants in prim. Greek (§ 63), as in *μεσαι-πόλιος*, *Θηβαι-*, *παλαι-*, *χαμαι-γενής*. In some dialects, e.g. the Arcadian, Boeotian, Elean, the *-ai* became generalized for the dat. and loc. (cp. § 325), whereas the other dialects, with the exception of a few isolated forms, generalized the antevocalic or pausa form for both cases.

The original ending of the instrumental was *-ā* which was preserved in Vedic *áśvā*. In Greek the case-form disappeared except in adverbs like Att. *πῆ, ταύτῃ*, Dor. *ταυτᾶ*, Att. *κρυφῇ*, Dor. *κρυφᾶ*, Att. *λάβθρᾶ*, Ion. *λάβθρη*, Lesb. *ἄλλᾶ*, *ὄππᾶ*.

Dual: The original ending of the nom. voc. and acc. was *-ai* as in Skr. *áśvē* = Indg. **ékwai*. Some scholars assume that the Gr. nom. pl. represents the old dual form, but it is highly improbable that the old dual should have become used for the plural and that then a new dual was created. The ending *-ā* is doubtless a new formation because it does not correspond to the dual ending in any of the other Indg. languages. It must also have come into existence in late prehistoric Greek, otherwise it would have become *-η* in Ionic and partly also in Attic (§ 51). The nom. voc. and acc. dual of this declension does not occur in Homer except in a few masculines like *Ἀτρεΐδᾶ*, *ὠκυπέτᾶ*. It is probable that the ending *-ā* was an analogical formation due to the influence of the *-ω* of the o-declension, cp. the similar new formations in the endings *-αιν*, *-αι*, *-αις*. The fact that the Gr. o-declension contained both masculine and feminine nouns (§ 324) might have helped to bring about the new formations in the dual and in the nom. and dat. plural.

It is quite uncertain what were the original endings of the gen. dat. loc. abl. and instr. cases, as there is no agreement among the Aryan, Greek, Irish and Baltic-Slavonic languages which preserved the dual in historic times. The Greek gen. and dat. ending *-αιν*, *-αιιν* was a new formation made after the analogy of *-οιν*, *-οιιν* of the o-declension.

Plural: The Indg. ending of the nom. and voc. pl. was *-ās* from older *-ā + es*, which regularly corresponds to the endings in Skr. *áśvāḥ*, Oscan *scriftas*, *scriptae*, Umbrian *urtas*, *ortae*, Goth. *gibōs*, Lith. *rañkos*. The Gr. nom.

pl. was remodelled after the analogy of the *-oi* of the *o*-declension, cp. the similar process in Lat. *equae* from older **equai* beside *equī* from older **equoi*.

-āns the original ending of the acc. corresponds to the endings in Att. Ion. Dor. *τιμᾶς*, Cret. *τιμάνς*, Lesb. *-αις* (§ 153), Lat. *equās*, Osc. *viāss*, *viās*, Lith. *rankās*. *-āns* was shortened to *-ans* in the prehistoric period of these languages and then became *-ās* in Att. Ion. Dor. Lat. Osc. and Lith. through the intermediate stage of a long nasal vowel. This change of *-ans* to *-ās* was later than that of Indg. *ā* to *η* in Att. and Ion., otherwise we should have **τιμήης* in these dialects. The *n* in *-ans* regularly disappeared in prim. Greek before consonants without lengthening of the preceding vowel, as in *Ἀθήναζε* from **Ἀθάνανς-δε*, *θύραζε* (§ 153). Some scholars regard *-ās* as the original ending of the acc. in order to account for Skr. *áśvāñ*, Goth. *gibōs*, but it is far more reasonable to assume that the Skr. and Goth. forms are the nom. used for the acc. than to suppose that *-āns* was a new formation in the other languages with *n* from the *o*-, *i*- and *u*-declensions.

The original Indg. gen. ending was probably *-ām*, a contraction of older *-ā + ōm*. Skr. *áśvā-nām* for **áśvām* was a new formation with *-nām* from the *n*-declension (§ 345). In prim. Greek and Italic the gen. was remodelled after the analogy of the pronominal declension, cp. the Homeric fem. gen. pl. *τάων* from **τάσων* = Skr. *tāsām*, Lat. *is-tārum* = Indg. **tāsōm*, whence Hom. (Aeolic) *θεάων*, Boeot. *-άων*, Ion. *-έων* from older *-ήων* (§ 72), Att. *-ῶν*, Dor. *-ᾶν*, Lesb. *-ᾶν* (§ 80). And similarly Lat. *equārum*, Osc. *-azum*, Umbr. *-arum* from **āzōm* older **āsōm*.

It is uncertain what was the ending of the loc. of this declension in the parent Indg. language. Skr. has *-āsu* (*áśvāsu*), Lith. *-osu* (*rañkosu*), and Gr. *-ασι*, *-ησι*; *-ασι*, *-ησι*; and *-αισι*, *-αις* (Hom. *-ης*). It is possible that the

original ending was *-āsu* and that it was changed to *-āsi* in early prim. Greek through the influence of the *-i* in the loc. singular (§ 305). This *-āsi* would regularly have become *-η* in Ion., *-η*, *-α* in Att. and *-α* in the other dialects (§ 213, 2), but no such endings have been preserved in the historic period of any of the dialects. After the law had ceased to operate whereby intervocalic *-σ-* disappeared, a new loc. was formed by adding *-σι* from the loc. of the consonantal stems direct to the stem, as in the inscriptional forms Ion. *δεσπόνησιν*, Att. *δίκησι*, *δραχμήσι*, *ταμίᾱσι*, preserved later only in adverbial forms like *Ἀθήνησι*, *Θήβησι*, *θύρᾱσι*, *ῥῥᾱσι*. It is generally assumed that the endings Ion. *-ησι*, Att. *-ησι*, *-ασι* were new formations after the analogy of *-οισι* of the o-declension, but it is also possible that they really represent double loc. endings formed by adding *-σι* to *-η*, *-α* (see above). The endings *-ησι*, *-ησι* (Att. also *-ᾱσι*, *-ασι*) disappeared on Att. inscriptions after about 420 B. C. and on Ion. inscriptions after about the beginning of the fourth century B. C., and their place was taken by *-αις*. The endings *-αις* (Hom. *-ης*), *-αισι* were formed on analogy with the *-οις*, *-οισι* of the o-declension. Cp. the similar formation in Lat. *-īs*, Osc. *-ais*.

b. *jā*-STEMS.

§ 322. In Greek the *jā*-stems only differ from the declension of the *ā*-stems in the nom. voc. and acc. singular. The suffix *-jā* was chiefly used in the parent Indg. language to form feminine nouns and adjectives from the masculine of u- and consonant-stems, as *ἡδεῖα* from **σφᾶδεϑja* : *ἡδύς* = Skr. *svādvī* : *svādūh*, *sweet*; *τέκταινα* from **τεκτανja*, older **τεκτηja* : *τέκτων* = Skr. *takṣṇī* : *tákṣan*, *carpenter*; *δότειρα* from **δοτερja* : *δοτήρ* = Skr. *dātrī* : *dātār*, *giver*; *φέρουσα* from **φεροντja* : *φέροντ* = Skr. *bhārantī* : *bhārant*, *bearing*; and similarly *βαρεία*, *γλυκεία*, *πλατεία*;

δέσποινα, θεράπεινα, λείαινα, μέλαινα, τέρεινα; γενέτειρα, μοῖρα, πείρα, σφαῖρα; δεικνύσα, διδοῦσα, τιθείσα, ιστᾶσα, λῦσᾶσα, μούσα, πᾶσα, χαρίεσσα. Pf. part. act. πεφυνῖα from *πεφυνσja : πεφυνῶς = Skr. babhūvūṣi : babhūvāṣ- for older *-vās-, *having been*; εἰδυῖα, Hom. ἰδυῖα : εἰδῶς = Skr. vidūṣi : vidvāṣ-, *knowing*. γλῶσσα from *γλωχja, δόξα from *δοκτja, θῆσσα from *θητja, ρίζα from *φριδja, φύξα from *φυγja, ἄμαξα, δίψα, θάλασσα, σχίζα. The j disappeared after a consonant + nasal (§ 130), as ἔχιδνα, μέριμνα, πτέρνα, τόλμα. Some scholars assume that these words had simply the ending -ə in prim. Indg., whilst others regard them as being new formations from original stems in -ā. πότνια : πόσις = Skr. pātnī : pātiḥ, *master, husband*; ψάλτρια, μία from *σμία.

The nom. sing. originally ended in -ī beside -(i)jə. The reason for this difference is unknown. The various Indg. languages generalized one or other of the two forms in prehistoric times. The former occurs in Sanskrit, Gothic and Lithuanian, as Skr. dēví, *goddess*, bṛhatī, *great*, svād-ví, *sweet*; Goth. mawi, *girl*, frijōndi, *friend*; Lith. vežantī, *vehens*, and the latter in Greek. In prim. Greek -(i)jə regularly became -ja after short and -ia after long syllables, but this differentiation was greatly obscured at a later period owing to numerous analogical formations whereby forms with long syllables were remodelled on the analogy of those with short syllables and vice versa (§ 119).

It is uncertain what was the original ending of the vocative. In the Aryan branch it is -i, as Skr. dēvi, bṛhati, svādvi, but in the other languages the nom. was used for the voc., as in Gr. ἡδεῖα, πότνια, Goth. mawi, frijōndi.

There is not sufficient agreement among the different branches of the Indg. languages to enable us to determine what was the original ending of the accusative. It was probably -(i)jām beside -(i)jəm, the former of which is represented by Goth. māuja, frijōndja, Lith. vėžanczà,

O.Slav. *vezašta*, *vehentem*, and the latter by Gr. ἡδεῖαν, τέκταιναν, φέρουσιν, πόντιαν, &c. The Aryan ending *-īm*, as in Skr. *dēvīm*, *bṛhatīm*, *svādīm* would then be a new formation with *-ī* from the nominative.

Gen. *-ης*, *-ās* = Indg. *-(i)jās* and corresponding to the endings in Skr. *dēvyāḥ*, *svādyāḥ*, Goth. *máujōs*, *frijōndjōs*, Lith. *vežanczōs*.

Dat. *-η*, *-α* = Indg. *-(i)jāi* and corresponding to the endings in Skr. *dēvyāi*, *svādyāi*, Goth. *máujái*, *frijōndjái*, Lith. *vėžanczai*.

C. MASCULINE *ā*-STEMS.

§ 323. As we have seen above (§ 320) the nouns belonging to this class were originally feminine abstract nouns which acquired a concrete meaning and then became masculine. In declension they only differ from the feminine *ā*-stems in the nom. voc. and gen. singular. The masculine nouns of this type were declined in Latin exactly like the feminine *ā*-stems. It is however possible that in the oldest Latin, as in Greek, the nominative took *-s* after the analogy of the *o*-declension, and that this ending is preserved in the two isolated O.Latin forms *hosticapas*, *hostium captor*; *paricidas*, *parricide*.

After the change of gender had taken place the nouns of this class took *-s* in the nom. after the analogy of the *o*-declension, as *νεανίας*, *πολίτης*, *Πέρσης*.

In the vocative two forms are to be distinguished, viz. *-α* and *-ā*, *-η*. The former is the original voc. ending of *ā*-stems and occurs in nouns which have *-της* in the nominative, in names of peoples, and in compound nouns, as *πολίτα*, *δέσποτα* beside nom. *δεσπότης*, *Σκύθα*, *Πέρσα*, *γεωμέτρα*; and the latter is the original nominative used for the vocative (§ 321) and generally occurs in all other nouns, as *νεανία*, *Κρονίδη*. Forms like *ιππότα* (*Νέστωρ*), *νεφεληγερέτα* (*Ζεύς*), *μητίετα* (*Ζεύς*), which are common in

epic poetry and occur almost exclusively in combination with proper names, are probably old vocatives which came to be used attributively as nominatives. And similarly it is probably more correct to regard the Boeot. nominatives *Νεστίδᾱ*, *Πῦθιονίκα*, &c. as vocatives which came to be used as nominatives than to assume that the original asigmatic nominative was preserved in this dialect. The genitive originally ended in *-ās*, as in the feminine *ā*-stems. To *-ās* was added *-o* from the old genitive (**λύκοο*, *λύκοιο*) of the *o*-declension. **-āso* regularly became *-āo* in Boeot., Thess. and Hom. (*Ἀτρείδᾱο*), *-āu* in Arcad., Cypr., and Pamphylian, *-eo* from older *-ηο* (§ 72), *-ω* in Ionic, *-ā* by contraction of *-āo* in Dor. (*Ἀτρείδᾱ*), Lesb. and Elean. Att. *πολίτου*, &c. had *-ου* direct from the *o*-declension. Boeot. *-ās* beside *-āo* was a new formation due to the influence of the nominatives in *-ā*, see the voc. above. Beside Ion. *-eo*, *-ω* there also occurs *-ευ* from older **-eo* with *-o* for *-ω* re-introduced from **λύκοο*.

NOTE.—In some dialects and especially in Ionic the accusative and genitive singular were often formed after the analogy of the masculine *es*-stems (§ 366) owing to the nominative singular being alike in both declensions.

2. THE *O*-DECLENSION.

§ 324. Greek and Latin are the only Indg. languages in which the *o*-declension contains masculine, feminine and neuter nouns. It is far more probable that a number of originally masculine nouns became feminine in these two languages than that the feminine was lost in the prehistoric period of all the other languages. The masculines and the feminines are declined alike in Greek and Latin.

§ 325. *a.* MASCULINE AND FEMININE O-STEMS.*Singular.*

| | Indg. | |
|------|------------|---------------|
| Nom. | -os | λύκος |
| Voc. | -e | λύκε |
| Acc. | -om | λύκον |
| Gen. | -osjo, -so | λύκοιο, λύκου |
| Dat. | -ōi | λύκῳ, θεῶ |
| Loc. | { -oi, -ei | οἴκοι, οἴκει |
| | { -oĩ, -eĩ | Ἰσθμοῖ, ἐκεῖ |

Dual.

| | | |
|----------------|---------|----------------|
| Nom. Voc. Acc. | -ōu, -ō | λύκῳ |
| Gen. Dat. | -? | λύκοιν, λύκοιν |

Plural.

| | | |
|-----------|---------------------|----------------|
| Nom. Voc. | -ōs | λύκοι |
| Acc. | -ons | λύκους, λύκους |
| Gen. | -ōm | λύκων, θεῶν |
| Dat. | -ōis, -ōis (instr.) | λύκοις, θεοῖς |
| Loc. | -oisu | λύκοισι |

Singular: The Indg. endings were remarkably well preserved in Greek. Nom. λύκος = Skr. *vṛkaḥ*, Lat. *lupus*, Goth. *wulfs*, Lith. *vilkas*, *wolf*. Voc. λύκε = Skr. *vṛka*, Lat. *lupe*, Goth. *wulf*, Lith. *vilkė*. Acc. λύκον = Skr. *vṛkam*, Lat. *lupum*, Lith. *vilką*.

It is impossible to determine what was the original Indg. ending of the genitive. In the declension of all other stems the genitive and ablative were originally alike, but in the o-declension the form of these two cases seems to have been partly differentiated during the prim. Indg. period, whereby a special genitive form with pronominal ending was created, cp. Indg. **tosjo* = *τοῖο*, Skr. *tásya* : *λύκοιο*, Skr. *vṛkasya*, beside Indg. **toso* = *τοῦ*, *τῶ* : prim. Gr. **fλύκοσο*, whence Att. Ion. and mild Dor. *λύκου*,

Boeot. Lesb. and severe Dor. $\lambda\acute{\upsilon}\kappa\omega$, Goth. *wulfis* with *-is* from *þis*, of *the*. The Greek, Aryan and Germanic languages accordingly have pronominal endings. What corresponds to the ablative in the other languages is used for the genitive and ablative in Baltic-Slavonic, as Lith. *viľko*, O.Slav. *vlŭka*. The Latin ending *-i*, which must also have existed in prim. Keltic, is of unknown origin. *-oio* and *-ou*, the latter of which can often be read as *-oo*, exist side by side in Homer. The ending *-oio* was however archaic already in Homer, but through imitation of him it is found in the language of poets of all periods. In Thessalian the ending *-oi* occurs beside *-ou*, *-ω*, *-oio*. It is difficult to account for the *-oi* unless we may suppose that it arose from *-oio* by elision of *-o*. Some scholars regard it as the locative ending used for the genitive, and others as being of the same origin as the Latin genitive ending *-i*, but both these proposed explanations are very doubtful.

The Indg. ending of the dative was *-ōi*, from older *-o + ai*, corresponding to the endings in $\theta\epsilon\hat{\omega}$, $\lambda\acute{\upsilon}\kappa\phi$, Lat. *lupō*, O.Lat. *populoi Romanoī*, *Numasioī*, *Numerio*, Lith. *viľkui*, Skr. *vṛkāy-a* for older **vṛkāi*. *-ōi* was shortened to *-oi* before consonants in prim. Greek (§ 63). Anteconsonantal *-oi* then became generalized for the dative in Arcadian, Boeotian, Elean, Thessalian and the North-West group of dialects. The locative and dative thus fell together in these dialects (cp. § 321). On the other hand what is called the dative in these dialects may simply be the original locative used for the dative.

In the parent Indg. language the locative seems to have ended in *-oi*, *-ei* beside *-ōi*, *-ēi*. The former occur in *oĩkoi*, *oĩkei*, Lat. *bellī*, *domī*, *humī*, *Corinthī*, and Skr. *vṛkē*, and the latter in *Ἰσθμοῖ* and in adverbs like *ποῖ*, *whither*; *ἐκεῖ*, *there*; Dor. *τεῖδε*, *here*; *τηνεῖ*, *there*; *πεῖ*, *where*.

The original ending of the ablative was *-ōd*, *-ēd*, which was preserved in Skr. *vṛkād*, *vṛkāt*, O.Lat. inscriptions

Gnaivōd, meritōd, facilmēd = later Lat. Gnaeō, meritō, facillimē. This case-form disappeared in Greek except in a few isolated adverbial forms, as Delph. *φοίκω, domo*; Cret. *τῶ-δε, hinc*; Cret. *ὧ, ὅπω, Locr. ὧ, ὅπω, unde*. It probably also occurs in adverbs like *οὔτω, οὔτω-s, σοφῶ-s*. In the Germanic languages the old ablative of adjectives came to be used adverbially, as *sinteinō, continually*, nom. *sinteins, continual*.

The original ending of the instrumental was *-ō, -ē*, which is found in Vedic *vṛkā*, Goth. *wulfa* (used for the dative), Lith. *vilkū*. The case-form disappeared in Greek except in a few isolated adverbial forms, as *πώ-ποτε, οὐ-πω, ἄφνω, ἀμαρτῇ, ὅπη, Laconian πῆ-ποκα, usquam or unquam*.

Dual: The original ending of the nom. voc. and acc. was *-ōu* beside *-ō* (§ 63), the latter of which was generalized in Greek and Baltic-Slavonic, as *λύκω, Lith. vilkū, O.Slav. vlūka*. Both endings occur in Vedic *vṛkāu, vṛkā*, but only the former in classical Sanskrit.

It is impossible to determine what were the original endings of the gen. dat. loc. abl. and instrumental, as there is no agreement among the languages which preserved the dual in historic times (cp. § 321). Greek *-οιιν, -οιν*, which came to be used in all kinds of stems except the *ā*-stems, has never been satisfactorily explained. The most probable explanation is that it arose from *-οι*, the original ending of the nom. voc. acc. neuter (§ 326), to which was added the dual pronominal ending *-ιν* from *νῶϊν, σφῶϊν* = Att. *νῶν, σφῶν* (§§ 402, 404). It may possibly also have arisen from *-οι* + the ending *-σι(ν)* from the loc. plural of conscantal stems, but this would presuppose that *ν ἐφελκυστικόν* became a fixture in this form at a very early period. *-οιιν* is the regular ending in Homer and *-οιν* in Attic.

Plural: The Indg. ending of the nom. and voc. was *-ōs* from older *-o + es*, which corresponds to the endings in Skr. *vṛkāḥ, Goth. wulfōs, Osc. Núlvanús, Nolani*. Greek,

Latin and Baltic-Slavonic have the pronominal ending. The Germanic languages also have it in the adjectives, cp. nom. τοί, Lat. *is-tī*, Goth. *þái*, O.Slav. *tī*, Skr. *tē*, Indg. **toi*, *the* : λύκοι, Lat. *lupī*, O.Slav. *vľŭci*, *wolves*; Goth. *blindái wulfōs*, *blind wolves*.

The original ending of the accusative was *-ons* which corresponds to the endings in Lat. *lupōs*, Goth. *wulfans*, Cret. λύκους beside *-os*, Att. Ion. and mild Dor. *-ous*, Boeot. and severe Dor. *-ws*, Lesb. *-ois*, Arcadian and Thessalian *-os*. *-ous* remained in prim. Greek in pausa and when the next word began with a vowel, but became *-os* when the next word began with a consonant (§ 153). The different dialects mostly generalized one or other of the sandhi forms, as Att. Ion. *-ous*, Boeot. *-ws*, Lesb. *-ois* from older *-ons* through the intermediate stage of a long nasal vowel.

The Indg. ending of the genitive was *-ōm* which corresponds to the endings in θεῶν, λύκων, Skr. *vṛkāṇ-ām* (with *-āṇ-* from the *n*-stems), O.Lat. *Rōmānom*, *deum*, *modium*, classical Lat. *lupōrum* with pronominal ending, cp. *istōrum*, Osc. *Núvlanúm*, *Nolanorum*, OE. *wulfa*, Lith. *vilkū* with regular loss of the final nasal in the last two languages.

θεοῖς, λύκοις and Lat. *lupīs* were originally the instrumental which came to be used for the dative. The Indg. ending of the instrumental was *-ōis* corresponding to the endings in Skr. *vṛkāih*, Lith. *vilkaiš*. On the shortening of the long diphthong in Greek see § 63.

The original ending of the locative was probably *-oisu* which corresponds to the ending in the Skr. loc. *vṛkāṣu*. *-oisu* may have become *-oisi* in prim. Greek through the influence of the *-i* in the loc. singular (§ 305), and then *-oisi* would have become **-oii* during the same period. λύκοισι admits of a twofold explanation. Either the ending *-ois* (see above) was changed to *-oισι* through the influence of the *-σι* of the consonantal stems or else it was formed direct from the nom. pl. λύκοι with *-σι* from the consonantal

stems. In either case the *-οισι* must have come into existence after the law had ceased to operate whereby intervocalic *-σ-* disappeared (§ 213, 2). *-οισι* is the regular form in Homer (and then later imitated by other poets), Herodotus, Lesbian and O. Attic. Until 444 B. C. *-οισι* beside *-οις* was equally common on Attic inscriptions, but the longer form had disappeared by the end of the century. And in like manner *-οισι* beside *-οις* was common on Ionic inscriptions in the fifth century B. C., but the longer form had disappeared by about the beginning of the fourth century. *λύκοισι* like *λύκοις* was used for the dative.

b. NEUTER O-STEMS.

§ 326. In Greek the declension of the neuter o-stems only differs from the masculine in the nom. voc. singular and the nom. voc. and acc. plural.

The original ending of the nom. voc. and acc. singular was *-om* which corresponds to the endings in *ζυγόν*, Skr. *yugám*, Lat. *jugum*, *yoke*. The ending regularly disappeared in the Germanic languages, as Goth. *juk*, *yoke*.

The Indg. ending of the nom. voc. and acc. dual was *-oi* which occurs in Skr. *yugé*, and in *dvé*, Vedic *duvé* = OE. *twā*, *two*. In Greek the regular form would have been **ζυγοί* which was changed to *ζυγώ* after the analogy of the masculines.

What is called the nom. voc. and acc. plural was originally a feminine collective singular which accounts for the fact that in Greek and Sanskrit the nom. pl. neuter takes the verb in the singular. It also accounts for the double plurals like *δεσμοί*, *κύκλοι*, *στάδιοι* beside *δεσμά*, *κύκλα*, *στάδια*, Lat. *jocī*, *locī* beside *joca*, *loca*, the former of which originally meant separate objects and the latter the objects taken collectively. The original ending was *-ā* which corresponds to the endings in Vedic *yugā* beside classical Skr. *yugā-ni* with *-ni* from the n-stems, Lat. *juga*,

Goth. *juka* with regular shortening of the final vowel in these two languages. *ζυγά* was formed after the analogy of the consonantal stems. This new formation must have taken place in prim. Greek, otherwise we should have had the regular ending **-ή* in Attic and Ionic, and **-ᾶ* in the other dialects.

§ 327. The so-called Attic declension had in prim. Greek the same case-endings as the ordinary *o*-declension. The prim. Greek forms of a noun like *νεώς* (Dor. *νᾶός*, Ion. *νηός*) were: sing. **νᾶος*, **νᾶον*, **νᾶοο*, **νᾶωι*; dual **νᾶω*, **νᾶοιν*; pl. **νᾶοι*, **νᾶους*, **νᾶων*, **νᾶωις*, which with the regular change of *-ᾶ* to *-η* (§ 51) together with shortening (§ 71) and quantitative metathesis (§ 72) became in Attic *νεώς*, *νεών* (sometimes also *νεώ* after the analogy of *ἥρω* from **ἥρωα*, see § 340), *νεώ* or *νεῶ* from **νεωο* older **νηοο*, *νεῶ*; *νεώ*, *νεῶν*; *νεῶ*, *νεώς*, *νεών*, *νεῶς*.

3. THE *ī*-DECLENSION.

§ 328. *a*. MASCULINE AND FEMININE SHORT *i*-STEMS.

| | Indg. | <i>Singular.</i> |
|------------------------------------|-------|--|
| Nom. <i>-is</i> | | <i>πόλις</i> |
| Voc. <i>-i, -ei or -oi</i> | | <i>πόλι</i> |
| Acc. <i>-im</i> | | <i>πόλιν</i> |
| Gen. <i>-eīs, -oīs</i> | | <i>πόλεως, πόληος, πόλειος</i> |
| Dat. <i>-ēi (loc.), -ei (loc.)</i> | | <i>πόλει, πόλειϊ, πόληϊ, πόλι</i> |
| | | <i>Dual.</i> |
| Nom. Voc. Acc. <i>-ī</i> | | <i>πόλεε, πόλει</i> |
| Gen. Dat. <i>?</i> | | <i>πολέοιν</i> |
| | | <i>Plural.</i> |
| Nom. Voc. <i>-ejes</i> | | <i>πόλεις, πόλιες, πόληες</i> |
| Acc. <i>-ins</i> | | <i>πόλεις, πόλιας, πόληας, πόλῑς, πόλινς</i> |
| Gen. <i>(i)jōm</i> | | <i>πόλεων, πολίων</i> |
| Dat. <i>-isu (loc.)</i> | | <i>πόλεσι, πόλισι, πολίεσσι</i> |

In the original Indg. declension the stem-forms contained various grades of ablaut nearly all of which disappeared in Greek owing to various new formations in several of the cases.

Singular : The Greek nominative ending corresponds to the endings in the other languages, as Skr. *agníḥ*, *fire* ; Skr. *áviḥ*, *óis*, Lat. *ovis*, Lith. *avis*, *sheep* ; Goth. *anst*, *favour*.

The original ending of the vocative was *-i* when the preceding syllable had the chief accent of the word, and *-ei* or *-oi* when the accent was on the ending. Greek and the Germanic languages generalized the former and Sanskrit the latter form, as *πόλι*, Goth. *anst*, beside Skr. *agné*. In Latin the nom. was used for the vocative.

-u from Indg. *-im* (§ 141) corresponds to the accusative endings in Skr. *agním*, *ávím*, Lat. *sitim*, *partim*. Forms like Lat. *ovem*, *hostem* were new formations with *-em* from the acc. of the consonantal stems. The ending *-im* regularly disappeared in Gothic, as *anst*.

The endings in Skr. *agnéḥ*, Goth. *anstáis*, Lith. *naktës* (nom. *naktis*, *night*) were regularly developed from the original endings of the genitive, which disappeared entirely in Greek and their place was taken by various new formations after the analogy of the *u*- and *i*-declensions. *πόλιος*, which occurs in all the dialects except Attic, had *-ios* from forms like *κιός* (§ 330). Att. *πόλεος* from **πόλεφος* with *-ef-* from the *u*-declension. Hom. *πόλῃος* with *-ῃ-* from the dative. Attic *πόλεως* from older **πολῃος* by quantitative metathesis (§ 72). Lat. *ovis*, *partis*, *hostis* had *-is* from the genitive of the consonantal stems.

The original locative ending *-ēi* became *ái* in Gothic, as *anstái*. The *-ī* in Lat. *ovī*, *hostī* can represent both Indg. *-ēi* and *-ei*. All the Greek forms were new formations. Att. and Hom. *πόλει*, Hom. *πόλεϊ* from **πόλεji* with *-i* from the dative of the consonantal stems in all the

Greek forms of the dative. Hom. and Att. (inscriptions 410-335 B.C.) $\pi\acute{o}\lambda\eta\tilde{i}$ is difficult to explain. Two solutions of the difficulty have been proposed, but neither of them is quite satisfactory. Some scholars assume that a locative ending \tilde{e} existed beside $\tilde{e}i$ in the parent Indg. language (cp. § 63), and that the former occurs in the Vedic locative $agn\tilde{a}$ beside $agn\tilde{a}u$ (a new formation after the analogy of the u -declension) and in Greek $\pi\acute{o}\lambda\eta + \tilde{i}$ with \tilde{i} from the dative of the consonantal stems. If this explanation is right $\pi\acute{o}\lambda\eta\tilde{i}$ must have been formed in fairly late prehistoric Greek, otherwise it would not have remained trisyllabic. Others assume that $\pi\acute{o}\lambda\eta\tilde{i}$ stands for an older $*\pi\acute{o}\lambda\eta f + \tilde{i}$ with ηf from the u -declension like the $\tilde{a}u$ in $agn\tilde{a}u$, but no trace of ηf exists in any of the dialects (§ 331). Ion. Cret. Boeot. Lesb., &c. $\pi\acute{o}\lambda\tilde{i}$ from $*\pi\omicron\lambda\iota$.

Dual: The nom. voc. and acc. originally ended in \tilde{i} , as in Skr. $agn\tilde{i}$. $\pi\acute{o}\lambda\epsilon\epsilon$, $\pi\acute{o}\lambda\epsilon\iota$ were from $*\pi\acute{o}\lambda\epsilon\tilde{j}\epsilon$ with $\tilde{e}j$ from the nom. plural and \tilde{e} from the dual of the consonantal stems. On the ending $\tilde{o}i\tilde{v}$ in the genitive and dative see § 325.

Plural: The endings in $\pi\acute{o}\lambda\epsilon\iota\varsigma$, Skr. $agn\tilde{a}y\tilde{a}h$, Lat. $ov\tilde{e}s$, $host\tilde{e}s$, Goth. $ansteis$ were all regularly developed from the Indg. nominative ending $\tilde{e}j\epsilon\varsigma$. Ion. Cret., &c. $\pi\acute{o}\lambda\epsilon\iota\varsigma$ was from forms like $k\tilde{i}\epsilon\varsigma$, Hom. $\pi\acute{o}\lambda\eta\epsilon\varsigma$ had the same η - as in $\pi\acute{o}\lambda\eta\tilde{i}$.

The original ending of the accusative was preserved in Cret. $\pi\acute{o}\lambda\iota\nu\varsigma$ and Goth. $anstin\varsigma$. Ion. $\pi\acute{o}\lambda\iota\varsigma$ like Lat. $ov\tilde{i}s$, $turr\tilde{i}s$ had regular loss of the nasal and lengthening of the preceding vowel (§ 69, 1). Lat. $ov\tilde{e}s$, $host\tilde{e}s$ may be either the nom. used for the acc. or else have $\tilde{e}s$ from the acc. of the consonantal stems. Att. Ion. $\pi\acute{o}\lambda\epsilon\iota\varsigma$ was the nom. used for the accusative. Hom. Dor. and Lesb. $\pi\acute{o}\lambda\iota\alpha\varsigma$ had $\tilde{i}\alpha\varsigma$ from forms like $k\tilde{i}\alpha\varsigma$. Hom. $\pi\acute{o}\lambda\eta\alpha\varsigma$ (see $\pi\acute{o}\lambda\eta\tilde{i}$) with $\tilde{a}\varsigma$ from $k\tilde{i}\alpha\varsigma$.

The endings in $\tau\rho\iota\omega\tilde{v}$, Lat. $trium$, Ion. Dor. and Lesb.

πολίων, Lat. *ovium*, *hostium* correspond to the original Indg. genitive ending *-(i)jōm̃*. Att. πόλεων had *-ε-* from the nominative.

The original locative ending was preserved in Skr. *triśú*, *tribus*, *agnīśu*. *τρισί*, Ion. πόλισι had *-σι* from the dat. of the consonantal stems, and similarly πόλεσι but with *-ε-* from the nominative. Hom. πολίεσσι had *-εσσι* from the dat. of the *s*-stems (§ 364). *πολίοις* in the North-West group of dialects was a new formation after the analogy of the dative of the *o*-declension.

b. NEUTER SHORT *i*-STEMS.

§ 329. In Greek the declension of the neuters only differed from the masculines and feminines in the nom. and acc. singular, and the nom. voc. and acc. plural. The nom. voc. and acc. singular originally ended in *-i* which was preserved in Skr. *vāri*, *water*, *ἵδρι*, but became *-e* in Latin, as *mare*, *leve*. The nom. voc. and acc. plural originally ended in *-ī* which was preserved in Vedic *trī*, *tria*. *τρία*, *ἵδρια* had *-α* from the plural of the consonantal stems, whereas Lat. *tria*, Goth. *þrija*, *three* were new formations after the analogy of the *o*-declension.

c. THE LONG *i*-STEMS.

§ 330. The long *i*-stems originally contained monosyllabic nouns like Skr. *dhīh̃*, *thought*, *κίς*, *λίς*, *ἴς*, Lat. *vīs*, and nouns of more than one syllable like Vedic *nadīh̃*, *river*. The latter class of nouns went over into the consonantal declension in prim. Greek (§ 343).

| | Indg. | Singular. | | |
|------|----------------------|-------------|----------------|------------------|
| Nom. | <i>-īs</i> | <i>κίς</i> | <i>dhīh̃</i> | <i>nadīh̃</i> |
| Voc. | <i>-ī, -ī</i> | <i>κίς</i> | <i>dhīh̃</i> | <i>nādi</i> |
| Acc. | <i>-ijm̃, -īm</i> | <i>κῖν</i> | <i>dhīyam</i> | <i>nadīyam</i> |
| Gen. | <i>-ijos</i> | <i>κίος</i> | <i>dhiyāh̃</i> | <i>nadīyāh̃</i> |
| Dat. | <i>-iji (= loc.)</i> | <i>κί</i> | <i>dhiyí</i> | <i>(nadīyām)</i> |

Dual.

| | | |
|----------------|------|-------|
| Nom. Voc. Acc. | -ije | κίε |
| Gen. Dat. | ? | κιοῖν |

Plural.

| | | | | |
|-----------|--------------|-------|--------|-----------|
| Nom. Voc. | -ijes | κίες | dhíyah | nadíyah |
| Acc. | -ij̄s | κίας | dhíyah | nadíyah |
| Gen. | -ijōm̄ | κιοῶν | dhíyām | (nadínām) |
| Dat. | -isu (=loc.) | κισί | dhīśú | nadíśu |

-ij- = Skr. -iy- alternated with -i-. The former was regular before vowels and the latter before consonants. In Greek the -ij- regularly became -i- (§ 128).

All the Greek forms, except the voc. singular, gen. and dat. dual, and dat. plural, were regularly developed from the original Indg. forms. The nom. was used for the voc. in Greek and in Skr. dhíh. The regular ending of the acc. singular would have been *-íya in Skr. (§ 85, 1), but -m, which originally belonged only to the ā-, o-, i- and u-declensions, was extended to the masc. and fem. acc. sing. of all declensions. Acc. *íva* for **iv*, *vim*, with -a added from the acc. of the consonantal stems. From *íva* was then formed a new gen. *ívos*, pl. *íves*, cp. the similar new formations in *Zḥva* : *Zḥv* (§ 337), *τίνα* : **τίν*. The gen. and dat. dual *κιοῖν* from **κijoῖν* had -οιν from the o-declension. The dat. plural *κισί* had -ι- from the other cases of the plural and -σι from the dat. of the consonantal stems.

4. THE ũ-DECLENSION.

§ 331. a. MASCULINE AND FEMININE SHORT u-STEMS.

| | Indg. | <i>Singular.</i> | |
|------|---------------------------|------------------|------------|
| Nom. | -us | πῆχυσ | ῆδύς |
| Voc. | -u, -eu or -ou | πῆχυ | ῆδύ |
| Acc. | -um | πῆχυν | ῆδύν |
| Gen. | -eūs, -oūs | πῆχεως, πῆχεος | ῆδέος |
| Dat. | -ēu (loc.), -eu (loc.) | πῆχει, πῆχεϊ | ῆδεϊ, ῆδεϊ |

Dual.

| | | | |
|----------------|----|--------------|------------|
| Nom. Voc. Acc. | -ū | πήχες, πήχει | ἡδέε, ἡδεῖ |
| Gen. Dat. | ? | πήχέοιν | ἡδέοιν |

Plural.

| | | | |
|-----------|---------------|---------------|--------------|
| Nom. Voc. | -ewes | πήχεις, πήχες | ἡδεῖς, ἡδέες |
| Acc. | -uns | πήχεις, πήχας | ἡδεῖς |
| Gen. | -(u)wōm | πήχεων | ἡδέων |
| Dat. | -usu (= loc.) | πήχεσι | ἡδέσι |

The stem-forms of the *u*-like the *i*-declension originally contained various grades of ablaut nearly all of which disappeared in Greek owing to various new formations in several of the cases.

Singular : The Greek nominative ending corresponds to the endings in the other languages, as Skr. *sūnūh*, Goth. *sunus*, Lith. *sūnūs*, *son*, Lat. *fructus*, *manus*.

The original ending of the vocative was *-u* when the preceding syllable had the chief accent of the word and *-eu* or *-ou* when the accent was on the ending. Greek and the Germanic languages generalized the former and Sanskrit and Lithuanian the latter, as *πήχυ*, *ἡδύ*, Goth. *sunu*, beside Skr. *sūnō*, Lith. *sūnaũ*. In Latin the nom. was used for the vocative.

-uv from Indg. *-um* (§ 141) corresponds to the accusative endings in Skr. *sūnūm*, Lat. *fructum*, Lith. *sūnų*, Goth. *sunu* with regular loss of the *-m*. Hom. *εὔρεα* for *εὔρυν* was formed after the analogy of the acc. plural.

The endings in Skr. *sūnōh*, Goth. *sunáus*, Lith. *sūnaũs*, Lat. *fructūs* were regularly developed from the original endings of the genitive, which disappeared entirely in Greek and their place was taken by new formations. The ending in *πήχως*, which only occurs in the nouns, was formed after the analogy of *πόλως* of the *i*-declension. The cause of the new formation was probably due to the fact that in Greek the endings of the dat. sing. *-(j)ι*, *-(f)ι*

and nom. pl. $-(j)\epsilon s$, $-(f)\epsilon s$ fell together in these two declensions. ἡδέος, Hom. πήχεος, older $*-\epsilon f o s$ with $-\epsilon f-$ from the dative.

The endings in Skr. *sūnāu*, Goth. *sunáu* were regularly developed from the original locative ending $-\bar{e}u$. The \bar{u} in Lat. *fructū* can represent both $-\bar{e}u$ and $-\bar{e}u$. The Gr. endings $-\epsilon i$, $-\epsilon \bar{i}$ are from older $*-\epsilon f i$ with $-i$ from the dative of the consonantal stems, cp. the similar new formation in Vedic *sūnāvi* beside *sūnāu*.

Dual: The original ending of the nom. voc. and acc. was preserved in Skr. *sūnū*. πήχεε, πήχελι was from older $*-\epsilon f \epsilon$ with $-\epsilon f-$ from the nom. plural and $-\epsilon$ from the dual of the consonantal stems. On the ending $-οιν$ in the gen. and dat. see § 325.

Plural: The endings in Att. πήχεις, Ion. πήχεες, and Skr. *sūnāvaḥ* were regularly developed from the Indg. nominative ending $-\epsilon wes$. Lat. *fructūs* was the acc. used for the nominative.

The original ending of the accusative was preserved in Cret. *υῖύς*, *sons* and Goth. *sununs*. πήχεις, ἡδέις were the nom. used for the accusative. Ion. πήχεας, εὐρέας were new formations after the analogy of the \bar{u} -stems (§ 334). Lat. *fructūs* was from older $*fructuns$ with regular loss of the $-n$ and lengthening of the preceding vowel.

πήχεων from older $*πηχεφων$ was a new formation with $-\epsilon f-$ from the nom. plural. The normal development of the original genitive ending occurs in Lat. *fructuom*, $-\uum$, $-\um$.

The original ending of the locative was preserved in Skr. *sūnūṣu*. πήχεσι, ἡδέσι for older $*-υσι$ with $-\epsilon-$ from the nom. plural and $-σι$ from the dative of the consonantal stems. The Hom. ending $-\epsilon σσι$ was from the s -stems (§ 364).

§ 332. In the declension of the word for *son* two stems

are to be taken into consideration, viz. prim. Greek **sūijos* = *viós* which was declined like an ordinary o-stem (§ 325); and prim. Greek **sūijus* = *viús*, Cret. *viús*, acc. Arcadian *viún*, Cret. *viún*, acc. pl. Cret. *viúvs*. The remaining cases of the singular, dual and plural were formed from the generalized stem form *viéf-*, as *viéos*, *viéi* (*viéi*); *viée*, *viéow*; *viéis* (*viées*), *viéow*, *viési*. The Hom. accusatives *viéa*, *viéas* were new formations after the analogy of the consonantal stems. At a later stage *vi-* came to be regarded as the stem-form, from which was made a new declension after the analogy of the inflected forms of *πατήρ* (§ 360), as **viś*, *viā*, *viōs*, *viī*; *viē*; *viēs*, *viās*, **viōw*, *viási*.

b. NEUTER SHORT u-STEMS.

§ 333. In Greek the declension of the neuters only differed from the masculines and feminines in the nom. and acc. singular, and the nom. voc. and acc. plural. The nom. voc. and acc. singular originally ended in -u which was preserved in Skr. *mádhu*, *mead*; Skr. *pásu* = Goth. *faíhu*, *cattle*; *ἄστυ*, *ἡδύ*. The origin of the ending in Lat. *cornū*, *genū*, *pecū* is obscure. The nom. voc. and acc. plural originally ended in -ū which was preserved in Vedic *purú*, *much*, *many*; *mádhū*, beside *purúṇi*, *mádhūni*. Lat. *cornua*, *genua* was a new formation after the analogy of the o-declension. In Greek the nouns and adjectives differed in the formation of the nom. plural. The former had -η, as *ἄστυη*, from older *-εσα, the ending of the neuter s-stems (§ 364), and the latter had -εα, as *ἡδέα*, from older *-εφα with -εφ- from the masc. and fem. nom. plural, and -α from the nom. plural of consonantal stems.

c. THE LONG ū-STEMS.

§ 334. The long ū-stems contain monosyllabic nouns like *ovs*, *ūs*, Lat. *sūs*, OE. *sū*, *píg*, *sow*; and *μῦς* which

originally belonged to the s-declension ; Skr. *bhū́ḥ*, *earth* ; and nouns of more than one syllable like *ἰχθῦς*, *ἰθύς* ; Vedic *tanú́ḥ*, *body*.

| | Indg. | Singular. | | | |
|----------------|---------------|-----------|--------|---------|-----------|
| Nom. | -ūs | σῦς | bhū́ḥ | ἰχθῦς | tanú́ḥ |
| Voc. | -u, -ū | σῦ | bhū́ḥ | ἰχθῦ | tánu |
| Acc. | -uwm̐, -ūm | σῦν | bhúvam | ἰχθῦν | tanúvam |
| Gen. | -uwos | συός | bhuváh | ἰχθύος | tanúvah |
| Dat. | -uwi (=loc.) | συί | bhuví | ἰχθύϊ | tanúvi |
| Dual. | | | | | |
| Nom. Voc. Acc. | -uwe | σύε | | ἰχθύε | |
| Gen. Dat. ? | | συοῖν | | ἰχθύοιν | |
| Plural. | | | | | |
| Nom. Voc. | -uwes | σύες | bhúvah | ἰχθύες | tanúvah |
| Acc. | -uwn̐s | σύας | bhúvah | ἰχθύας | tanúvah |
| Gen. | -uwōm̐ | συῶν | bhuvám | ἰχθύων | (tanúnām) |
| Dat. | -ūsu (=loc.) | συσί | bhūśú | ἰχθύσι | tanúṣu |

·uw· = ·vf·, Skr. ·uv· alternated with ·ū·. The former was regular before vowels and the latter before consonants. In Greek the ·vf· regularly became ·v· (§ 119).

All the Greek forms except the gen. and dat. dual, and the dat. plural were regularly developed from the original Indg. forms. *συοῖν*, *ἰχθύοιν* from **συφοῖν*, **ἰχθύφοιν* had ·οῖν· from the o-declension. *συσί*, *ἰχθύσι* had *v* for *ū* from the other cases of the plural and ·σι· from the dative of the consonantal stems. Hom. *σέσσι* with ·εσσι· from the s-stems. In the Sanskrit monosyllabic nouns the nom. was used for the vocative. Beside the regular acc. sing. *ἰχθῦν* there also occurs in later Greek *ἰχθύα* formed after the analogy of the acc. plural. On the ending in Sanskrit *bhúvam*, *tanúvam*, see § 330. Beside the regular acc. pl. *σύας*, *ἰχθύας* there also occurs in Attic and Ionic *σῦς*,

ἰχθῦς from older -νυς which was formed after the analogy of the acc. singular. This new formation was also occasionally used for the nominative. For nouns which have -ν throughout all cases see §§ 265-6.

5. THE DIPHTHONGAL DECLENSION.

§ 335. This declension contains monosyllabic nouns and nouns of more than one syllable. It is subdivided into four categories according as the stem ends in -āu-, -ēu-, -ōu- or -ōi-. The stem-forms of each category originally contained various grades of ablaut, but in Greek as in the other Indg. languages one or other of the stem-forms was generally extended to all the cases by levelling.

a. āu-STEMS.

§ 336.

Singular.

Indg.

| | | |
|--------------|--------|------------------------|
| Nom. Voc. | *nāus | ναῦς, νηῦς |
| Acc. | *nāwṃ | ναῦν, νῆα, νέα |
| Gen. | *nāwós | νεώς, νηός, νεός, νᾱός |
| Dat. (=loc.) | *nāwí | νηί, νᾱί |

Dual.

| | | |
|----------------|-------|-------|
| Nom. Voc. Acc. | *nāwe | νῆε |
| Gen. Dat. | ? | νεοῖν |

Plural.

| | | |
|--------------|--------|---|
| Nom. Voc. | *nāwes | νῆες, νέες, νᾱες |
| Acc. | *nāwṃs | ναῦς, νῆας, νέας, νᾱας |
| Gen. | *nāwōm | νεῶν, νηῶν, νᾱῶν |
| Dat. (=loc.) | *nāusú | ναυσί, νηυσί, νηέσσι, νέεσσι, νᾱέσσι |

-āw- = prim. Gr. -āf-, Skr. and Lat. -āv- regularly alternated with -āu-. The former occurred before vowels and the latter before consonants. The āu-stems seem to have levelled out the -ā- of -āw-, -āu- already in the parent

Indg. language. Intervocalic *-f-* regularly disappeared in Greek (§ 122). The *-ε-* in forms like *νέα*, *νέος*, *νέας*, &c. which occur in Homer and Herodotus was due to the shortening of older *-η-* before the following vowel (§ 71).

Singular: In the nominative *ναῦς* the first element of the diphthong was shortened in prim. Greek (§ 63), cp. Skr. *nāuḥ*, Lat. *nāvis* with the ending of the *i*-declension in all its cases. The *η* in Hom. *νηῦς* and also in the dat. pl. *νηυσί* was due to levelling out the *η* of the other cases where it was regular.

The accusative form *ναῦν* was a new formation from the nominative. Hom. *νηα* from older **νηφα*, **ναφα* corresponds to Indg. **nāwṃ*, Skr. *nāvam* (see § 330), Lat. *nāvem*.

The original genitive **nāwós* corresponds to Dor. *νᾱός*, Ion. *νηός* and Att. *νέος* with quantitative metathesis (§ 72), Skr. *nāvāḥ*, Lat. *nāvis*.

The dative Dor. *νᾱί*, Lesb. *νᾱί*, Att. Ion. *νηί* were all from prim. Greek **ναφι* = Indg. **nāwí*, Skr. *nāví*, cp. Lat. *nāvi*.

Dual: Nom. voc. and acc. *νηε* from prim. Greek *ναφε* = Indg. **nāwe*, Skr. *nāvāu* probably had its ending from the *u*-declension. Gen. dat. *νεοῖν* from older **νηφοῖν*, **ναφοῖν* (§ 325), see *νέα*, &c. above.

Plural: The nominative Dor. *νᾱες*, Att. Ion. *νηες* were from prim. Greek **ναφες* = Indg. **nāwes*, Skr. *nāvah*, Lat. *nāvēs*.

The Attic accusative *ναῦς* was a new formation after the analogy of the accusative singular. Dor. *νᾱας*, Ion. *νηας* = prim. Greek **ναφας*, Skr. *nāvah*, Lat. *nāvēs*.

The Att. Ion. genitive *νεῶν* was from older *νηῶν* with shortening of *η* to *ε* (§ 71). Dor. *νᾱῶν*, Hom. *νηῶν* from prim. Greek **ναφῶν* = Indg. **nāwóm*, Skr. *nāvām*, Lat. *nāvium*.

The dative **ναυσί* was shortened to *ναυσί* in prim. Greek (§ 63), cp. the nom. singular, Ion. *νηυσί* like *νηῦς* had *η*

from the other cases. The ending $-\sigma\iota$ was from the dat. of the consonantal stems. Dor. $\nu\acute{\alpha}\epsilon\sigma\sigma\iota$, Hom. $\nu\acute{\eta}\epsilon\sigma\sigma\iota$ with $-\epsilon\sigma\sigma\iota$ from the s-stems.

b. ēu-STEMS.

§ 337. Some of the original ablaut-grades were preserved in the declension of $Z\epsilon\acute{\upsilon}s$; Skr. $dy\acute{á}uḥ$, *sky, day*, Lat. *diēs*, Jov., viz. $djēu-$ in $Z\epsilon\acute{\upsilon}s$, Skr. $dy\acute{á}uḥ$, Lat. *diēs*, and O.Lat. *Diēspiter*; $djeu-$ in $Z\epsilon\upsilon$, Lat. *Jū-piter*, Jov.; and $diw-$ in $\Delta\acute{\iota}os$, Skr. $diváḥ$.

| | Indg. | | | |
|--------------|-------------|--|---------------------|----------------------|
| Nom. | * $djēus$ | $Z\epsilon\acute{\upsilon}s$ | $dy\acute{á}uḥ$ | (<i>diēs</i>) |
| Voc. | * $djēu$ | $Z\epsilon\upsilon$ | ($dy\acute{á}uḥ$) | <i>Jū-piter</i> |
| Acc. | * $djē(u)m$ | $Z\eta\eta\nu$ | $dy\acute{á}m$ | <i>diem, (Jovem)</i> |
| Gen. | * $diwós$ | $\Delta\acute{\iota}os$ | $diváḥ$ | (<i>Jovis</i>) |
| Dat. (=loc.) | * $djēwi$ | $\Delta\acute{\iota}ι, \Delta\acute{\iota}ι$ | $dy\acute{á}vi$ | <i>Jove</i> |

The nominative $Z\epsilon\acute{\upsilon}s$ was regularly developed from the original form * $djēus$ (§§ 63, 129, 8). Latin *diēs* was a new formation from the acc. before * $diēm$ was shortened to *diem*.

$Z\epsilon\upsilon$ corresponds to the original vocative * $djēu$ and to the *Jū-* in *Jūpiter* = $Z\epsilon\upsilon$ $\pi\acute{\alpha}\tau\epsilon\rho$. *Jūpiter* then came to be used as a nominative.

The accusative $Z\eta\eta\nu$ corresponds to Vedic $dy\acute{á}m$, Lat. *diem*, Indg. * $djē(u)m$ (§ 63). From $Z\eta\eta\nu$ a new acc. $Z\eta\eta\nu\alpha$ was formed with $-a$ from the acc. of consonantal stems. From $Z\eta\eta\nu\alpha$ was then formed a new gen. $Z\eta\eta\nuós$, dat. $Z\eta\eta\nuί$.

$\Delta\acute{\iota}a$ from * $\Delta\acute{\iota}fa$, like classical Skr. *divam* beside Vedic $dy\acute{á}m$, was a new formation from the gen. with $-a$ from the acc. of consonantal stems. And similarly Lat. *Jovem*, gen. *Jovis* were formed after the analogy of *Jove*.

The genitive $\Delta\acute{\iota}os$ from * $\Delta\acute{\iota}fós$, Skr. $diváḥ$ was regularly developed from the original form * $diwós$.

The dative *Διτί*, *Δί* from **Διτί*, like classical Skr. *diví* beside Vedic *dyávi* = Lat. *Jove*, was formed after the analogy of the genitive.

§ 338. In the declension of *βασιλεύς* and similar words the ablaut-grade *-ēu-* originally belonged only to the stem of the nom. singular. The *-ēu-* (= *-ēw-* before vowels) was in prim. Greek levelled out into all the cases except the voc. singular which retained the old ablaut-grade *-eu-*. To this declension belonged also the Hom. proper names like *Ἀτρεύς*, *Πηλεύς* which generalized the ablaut-grade *-eu-* (= *-ew-* before vowels) in the oblique cases, as voc. *-ēū*, acc. *-έ(f)α*, gen. *-έ(f)ος*, dat. *-έ(f)ι*. The nom. ending *-εύς* was a shortening of older **-ηύς* (§ 63).

Singular.

Prim. Greek.

| | | |
|------|--------------|-------------------------------------|
| Nom. | <i>-ηυς</i> | <i>βασιλεύς</i> |
| Voc. | <i>-ευ</i> | <i>βασιλεῦ</i> |
| Acc. | <i>-ηφα</i> | <i>βασιλέα, βασιλῆα, βασιλέα</i> |
| Gen. | <i>-ηφος</i> | <i>βασιλέως, βασιλῆος, βασιλέος</i> |
| Dat. | <i>-ηφι</i> | <i>βασιλεῖ, βασιλῆι, βασιλέϊ</i> |

Dual.

| | | |
|----------------|---------------|-------------------------|
| Nom. Voc. Acc. | <i>-ηφε</i> | <i>βασιλέε, βασιλῆε</i> |
| Gen. Dat. | <i>-ηφειν</i> | <i>βασιλέοιν</i> |

Plural.

| | | |
|-----------|--------------|--|
| Nom. Voc. | <i>-ηφες</i> | <i>βασιλείς, βασιλῆς, βασιλῆες, βασιλέες</i> |
| Acc. | <i>-ηφας</i> | <i>βασιλέας, βασιλῆας, βασιλέας</i> |
| Gen. | <i>-ηφων</i> | <i>βασιλέων, βασιλῆων</i> |
| Dat. | <i>-ηφσι</i> | <i>βασιλεῦσι</i> |

In the nom. singular and dat. plural the *-ηυ-* was shortened to *-ευ-* in prim. Greek. In the Arcadian and Cyprian dialects a new nom. singular in *-ης* was formed with *-η-*

from the gen. and dative. The endings $-\eta\acute{\alpha}$, $-\eta\acute{\omicron}\varsigma$, $-\eta\acute{\alpha}\varsigma$ regularly became $-\epsilon\acute{\alpha}$, $-\epsilon\omicron\varsigma$, $-\epsilon\acute{\alpha}\varsigma$ in Attic by loss of $-\eta-$ and quantitative metathesis (§ 72). The $-\epsilon-$ in the Ionic and Doric endings $-\epsilon\acute{\alpha}$, $-\epsilon\omicron\varsigma$, $-\epsilon\acute{\iota}$, $-\epsilon\epsilon\varsigma$, $-\epsilon\acute{\alpha}\varsigma$ was due to the shortening of $-\eta-$ before the following vowel (§ 71); and similarly in the Attic endings $-\epsilon\acute{\iota}$, $-\epsilon\epsilon$ (nom. dual), $-\epsilon\omicron\iota\nu$, $-\epsilon\omega\nu$. The forms with $-\eta-$ belong to the Hom. Cypr. Lesb. and Boeotian (written $-\epsilon\acute{\iota}$ in Boeot.) dialects. $-\eta\varsigma$ contracted from $-\eta\epsilon\varsigma$ (on inscriptions) was the regular ending of the nom. plural in Attic until after the middle of the fourth century B.C. At about this time a new nom. ending $-\epsilon\acute{\iota}\varsigma$ was formed after the analogy of the nom. of the *u*-declension owing to the gen. plural being alike in both declensions. From about the end of the fourth century $\beta\alpha\sigma\iota\lambda\epsilon\acute{\iota}\varsigma$ came to be used also for the accusative. The older nom. $\beta\alpha\sigma\iota\lambda\eta\varsigma$ was used for the accusative at a much earlier period. See § 268.

c. *ōu*-STEMS.

§ 339. In the original declension of the word for *cow*, *ox* the stem-forms had the three ablaut-grades $g\acute{o}u-$, $gou-$ (= *gow-* before vowels) and $gu-$. The form $gu-$ does not occur in the declension of $*g\acute{o}us$ (§ 205) in any of the languages. It is therefore probable that it disappeared already in the parent Indg. language and that its place was taken by the stem-form $gou-$ in the gen. singular, gen. and dat. dual, and in the gen. and loc. plural. In writing down the hypothetical Indg. forms the accent has been omitted in the gen. and dat. of the singular and plural, because of the difference in the accentuation of the Greek and Sanskrit forms. The Greek doubtless represents the original accentuation except in the dat. singular.

Singular.

| | Indg. | | | |
|--------------|---------|-----------|--------|---------|
| Nom. | *gōus | βοῦς, βῶς | gāuḥ | bōs |
| Voc. | *gōu | βοῦ | (gāuḥ) | (bōs) |
| Acc. | *gō(u)m | βοῦν, βῶν | gām | (bovem) |
| Gen. | *gowos | βοός | (gōḥ) | bovis |
| Dat. (=loc.) | *gowi | βοί | gāvi | bove |

Dual.

| | | | |
|----------------|-------|-------|-------|
| Nom. Voc. Acc. | *gōwe | βόε | gāvāu |
| Gen. Dat. | ? | βοοῖν | |

Plural.

| | | | | |
|--------------|--------|--------------------|-------|----------------|
| Nom. Voc. | *gōwes | βόες | gāvaḥ | bovēs |
| Acc. | *gōwŋs | βοῦς, βόας, βῶς | (gāḥ) | bovēs |
| Gen. | *gowōm | βοῶν | gāvām | bovom, bouv |
| Dat. (=loc.) | *gousu | βοοσί, βόεσσιν | gōṣu | |

Singular: The prim. Greek nominative *βῶς was regularly shortened to βοῦς (§ 63). Dor. βῶς was a new formation from the original accusative, and probably also Lat. bōs (a loan word from one of the other Italic dialects).

The accusative βοῦν was a new formation after the analogy of the nominative. Dor. βῶν = Skr. gām and Indg. *gō(u)m. Lat. bovem was a new formation after the analogy of bovis, bove.

The genitive βοός corresponds to Vedic gāvaḥ beside classical Sanskrit gōḥ, Lat. bovis, Indg. *gowos.

The dative βοί, Skr. gāvi and Lat. bove were all regularly developed from the original form *gowi.

Dual: The Greek dual forms were new formations with βο-, older *βοf-, from forms where it was regular, as in βοός, βόες. The original stem *gōw- occurs in Skr. gāvāu with the ending -āu from the u-declension.

Plural: The nominative βόες was from the original form *gówes. Skr. gāvaḥ can represent a prim. Aryan form *gāvas (= *gówes) or *gāvas in which case the latter would be a new formation. Lat. bovēs was the acc. used for the nominative.

βοῦς, βῶς and Skr. gāḥ were new formations after the analogy of the acc. singular. Some scholars assume that there existed in the parent Indg. language an acc. form *gó(u)ms beside *gówus, and that the former occurs in Dor. βῶς, Skr. gāḥ and the latter in Hom. βόας, older Skr. gāvaḥ, and Lat. bovēs.

βοῶν, Skr. gāvām and Lat. bovom, boum were all regularly developed from the original genitive form *gowōm.

The stem in the dative βουσί corresponds to the original stem *gou- and to the gō- in Skr. góṣu; -σι was from the dat. ending of the consonantal stems. Hom. βόεσσι was a new formation with βο-, older *βοf-, from the other cases of the plural and -εσσι from the dat. plural of the s-stems.

§ 340. It cannot be determined with certainty whether nouns like δμός, ἥρως, μήτρως, πάτρως, Τρώς were originally *ōu*-stems or whether they were *o*-stems which underwent contraction after the loss of intervocalic -f-, as πάτρως from *πατρωφος, and then became declined like consonantal stems. If they were originally *ōu*-stems we must assume that the ablaut-grade *-ōu-* (= *-ōw-* before vowels), which belonged properly to the stem of the nom. singular only, was levelled out into all the cases in prim. Greek, and that then there were formed a new nom. singular πάτρως for *πατρωus, and dat. plural πάτρωσι for *πατρωusi, the -ω- of which would have been shortened to -ου, cp. βασιλεύς, βασιλεῦσι.

Singular.

Prim. Greek.

| | | |
|--------------|------------|-----------------------|
| Nom. Voc. | -ως or -ως | πάτρωσ |
| Acc. | -ωφα | πάτρωα, πάτρω, πάτρων |
| Gen. | -ωφος | πάτρωος |
| Dat. (=loc.) | -ωφι | πάτρωϊ, πάτρω |

Dual.

| | | |
|----------------|--------|----------|
| Nom. Voc. Acc. | -ωφε | πάτρωε |
| Gen. Dat. | -ωφουν | πατρώουν |

Plural.

| | | |
|--------------|---------------|-----------------|
| Nom. Voc. | -ωφες | πάτρωες, πάτρωσ |
| Acc. | -ωφας | πάτρωας, πάτρωσ |
| Gen. | -ωφων | πατρώων |
| Dat. (=loc.) | -ωνσι or -ωσι | πάτρωσι |

In Attic *πάτρωα, πάτρωες, πάτρωας* were generally contracted into *πάτρω, πάτρωσ*. Att. Ion. *πάτρων, πάτρω* were formed after the analogy of *νεών, νεφ̄ : νεός* (§ 327); and similarly a gen. *πάτρω* beside the regular form *πάτρωος* also occurs. The Cretan acc. plural *πάτρωανσ* was formed after the analogy of the acc. plural of *ā-, o-, i-* and *u-*stems.

d. *ōi*-STEMS.

§ 341. To this declension belong the feminine nouns *ἐνέστω, ἡχώ, λεχώ, πειθώ* and proper names like *Καλυψώ, Δητώ*. It is doubtful whether nouns like *ἀηδών, εἰκώ* beside *ἀηδών, εἰκών* originally belonged to this class or to the *n*-declension. The stem-forms originally had the three ablaut-grades *-ōi-, -oi-* and *-i-* with regular change of *-i-* to *-j-* before case-endings beginning with a vowel. All three grades occur in the Sanskrit declension of *sákhā, friend*, as singular acc. *sákhāyam*, voc. *sákhē*, gen. *sákhyaḥ*; plural nom. *sákhāyaḥ*, loc. *sákhīṣu*. In Greek the *-oi-* grade was generalized in the oblique cases. The nom. singular may have ended in *-ōi* beside *-ō* (nom. Skr. *sákhā*,

Gr. *πειθῶ*) in the parent Indg. language (§ 63), and it is possible that the ending *-ωι*, which occurs on old Corinthian inscriptions, represents the original *-ōi*. The *-ι* however may have come from the vocative. Skr. *sákhā* and similar nouns were declined in the singular, dual and plural, but few of the words belonging to this declension admit of a plural in Greek. Those which do have a plural form it after the analogy of the *o-* or *n-*declension.

Prim. Greek.

| | | |
|--------------|-----------|----------------------|
| Nom. | -ω or -ωι | <i>πειθῶ, πειθῶι</i> |
| Voc. | -οι | <i>πειθοί</i> |
| Acc. | -οῖα | <i>πειθῶ</i> |
| Gen. | -οῖος | <i>πειθοῦς</i> |
| Dat. (=loc.) | -οῖι | <i>πειθοί</i> |

The Dor. Boeot. and Lesb. dialects had the case-endings *-ω, -ων, -ως, -φ* after the analogy of the similar quantitative endings of the *ā-*declension. The origin of the Ion. acc. ending *-οῦν* (Herodotus *Ἀητοῦν*, &c.) is obscure. Ion. had the gen. ending *-όος* beside Att. Ion. *-οῦς*. If nouns like *ἀηδών* originally belonged to this class the *-ν* was first added in the nom. singular and then they passed over into the *n-*declension.

B. THE CONSONANTAL DECLENSION

I. STEMS ENDING IN AN EXPLOSIVE.

§ 342. The stems of nouns belonging to this class end in a dental, labial or guttural. The stem of the monosyllabic nouns had originally various grades of ablaut in the different cases, but in Greek as in the other languages one or other of the grades was generally levelled out into all the cases, thus the ablaut-grade *ō*, which originally belonged only to the nom. singular, was generalized in Sanskrit *vāk* = Lat. *vōx*, *ῥψ*, *voice*; acc. *vācam*, *vōcem*, *ῥπα*; gen. *vācāḥ*, *vōcis*, *ῥπός*; loc. *vācī*, *vōce*, *ῥπί*, whereas in Greek

the grade *o*, which originally belonged to the oblique cases, was levelled out into the nominative; and similarly Lat. *lĕx*, *rĕx* beside *φλέψ*, *φλόξ*; and conversely *κλώψ*, *σκώψ*, *ῥώψ* beside Lat. *nex*, *ops*. The original ablaut-grades were better preserved in the declension of the Indg. word **pōts*, **pēts*, *foot*. See § 234, 1.

Singular.

| | Indg. | | | |
|--------------|----------|----------------|-------|-------|
| Nom. Voc. | ·s | πούς, πός, πώς | pāt | pēs |
| Acc. | ·m̄ | πόδα | pādam | pedem |
| Gen. | ·os, ·es | ποδός | padāh | pedis |
| Dat. (=loc.) | ·i | ποδί | padī | pede |

Dual.

| | | | |
|----------------|----|--------|---------|
| Nom. Voc. Acc. | ·e | πόδε | (pādāu) |
| Gen. Dat. | ? | ποδοῖν | |

Plural.

| | | | | |
|--------------|------|-------------|-------|---------|
| Nom. Voc. | ·es | πόδες | pādaḥ | (pedēs) |
| Acc. | ·ns | πόδας | padāḥ | pedēs |
| Gen. | ·ōm̄ | ποδῶν | padām | pedum |
| Dat. (=loc.) | ·su | ποσσί, ποσί | patsú | |

Dor. *πώς* from **pōts* represents the original form. *πός* was a new formation with *-o-* from the oblique cases. It is difficult to account for *πούς* which seems to be merely a lengthening of *πός*. Hom. *ποσσί* beside *ποσί* (§ 212). Hom. *πόδεσσι* was formed from the stem *ποδ-* with the dat. ending of the *s*-stems. In Lat. the acc. *pedēs* from **pedens* was used for the nominative. The *e* grade of ablaut occurs in *πέδον* and in the Boeot. Lesb. Cret. and Arcadian preposition *πεδά*, *with*, *after*.

§ 343. The stem-endings *-d*, *-b*, *-g* became *-t*, *-p*, *-k* before the case-endings *-s*, *-su* in prim. Indo-Germanic (§ 106). The original stem-endings *-dh*, *-th*, *-bh*, *-ph*, *-gh*, *-kh* likewise became *-t*, *-p*, *-k* before these case-endings in prim.

Greek (§ 109). Prim. Greek *ps* and *ks* remained in the historic period of the language. *ts* became *ss*, which was simplified to *s* finally. Medial *ss* remained in the oldest Greek, but already in Homer *s* existed beside *ss* (§ 166). Examples are: κλώψ, κλωψί : κλωπ-, φλέψ : φλεβ-, κατήλιψ : κατηλιφ-, φύλαξ, φύλαξι : φυλακ-, μαστίξ : μαστίγ-, σάλπιγξ : σαλπιγγ-, θρίξ, θριξί : τριχ-, νεότης from *νεφοτάτς, Lat. *novitās* : νεότητ-, *novitāt-*, νύξ : νυκτ-, cp. Lat. *nox* : *noct-*, ἀναξ : ἀνακτ-, πούς, ποσσί, ποσί : ποδ-, λαμπάς : λαμπαδ-, κόρυς : κορυθ-, ὄρνις : ὄρνιθ-.

The nom. singular of stems ending in -ιτ, -ιδ, -ιθ, -υδ, -υθ regularly fell together with the nominative of the *i-* and *u-* declensions which gave rise to various new formations especially in the voc. and acc. singular, as voc. Ἄρτεμι, ἐλπί, ἔρι, παῖ, τυραννί : Ἄρτεμιδ-, ἐλπιδ-, ἔριδ-, πα(φ)ιδ-, τυραννιδ-. Acc. χάριμ, ἔριν, κλειῖν, νῆιν, ὄπιν, ὄρνιν, φύλοπιν, κόρυν : χάριτα, ἔριδα, κλείδα, νήιδα, ὄπιδα, ὄρνιθα, φυλόπιδα, κόρυθα. And similarly accusatives like πολύπουν, τρίπουν (Hom. τρίποδα) were formed after the analogy of εὔνου : εὔνους.

It is improbable that the vocatives ἀνα, γύναι from *ἀνακτ, *γυναικ represent an original distinction between the nom. and voc. in this class of nouns.

§ 344. The bare stem was originally used for the nom. voc. and acc. neuter. In Greek the operation of the laws of final consonants has to be taken into consideration (§ 230), as κῆρ from *κηρδ; the gen. κῆρος was a new formation from the nominative, cp. Lat. *cor*, *cordis*; γάλα from *γαλακτ, cp. Lat. *lac*, *lactis*; μέλι from *μελιτ.

2. THE Π-DECLENSION.

§ 345. The stems in -μον-, -μεν- (δαίμων : δαιμον-, τέρμων : τερμον-, ποιμήν : ποιμεν-) and in -ον-, -εν- (πέπων : πεπον-, τέκτων : τεκτον-, τέρην : τερεν-, φρήν : φρεν-) originally had various grades of ablaut in the stem-endings of the different

cases, as *-mōn*, *-mēn*; *-mon-*, *-men-*; *-mn-* before vowels, but *-mŋ-* before consonants; *-ōn*, *-ēn*; *-on-*, *-en-*; *-n-* before vowels, but *-ŋ-* before consonants. The alternation between *ě* and *ō* originally depended upon the position of the accent of the word. The former stood in the syllable containing the chief accent and the latter in the next syllable following it, as *ποιμήν*, *ποιμένες*: *τλήμων*, *τλήμονες*; *φρήν*, *φρένες*: *ἄφρων*, *ἄφρονες* (cp. § 83). When the accent was shifted to the case-ending the vowel disappeared and then the *n* remained consonantal or became vocalic according as the next syllable began with a vowel or a consonant, as *ἄρην*, *κύων*, gen. *ἄρνός*, dat. pl. **ἀρασί*, **κυασί*. In the parent Indg. language *e* alternated with *o* in the declension of the same word. This distinction was preserved in Gothic, as *guma*, *man*, dat. *gumin*, acc. *guman* where the endings *-in*, *-an* represent original *-eni*, *-onŋ*; and similarly in the Baltic-Slavonic languages. In Sanskrit Indg. *e* and *o* fell together in *a* (§ 42) whereby the original distinction became obliterated. It may be however that the two vowels only regularly fell together in closed syllables, but that in open syllables the former vowel became *a* and the latter *ā*. This would account for the long *ā* in the acc. sing. *rājānam*, *king*, nom. pl. *rājānaḥ*, beside loc. sing. *rāj-ani* = Indg. *-eni*. In Greek the distinction became entirely obliterated by the levelling out of one or other of the two vowels. Then those stems which levelled out the *e* came to have *η* in the nom. singular and those which levelled out the *o* came to have *ω*. In the present state of our knowledge it cannot be determined with any degree of certainty which of the strong cases originally had *e* and which had *o*. In reconstructing the primitive stem-forms we shall therefore not attempt to distinguish between *e* and *o* in the declension of the same word. *-mōn*, *-mēn*, *-ōn*, *-ēn* regularly belonged to the nom. singular only; *-mon-*, *-men-*, *-on-*, *-en-* to the voc. acc. and

dat. (= loc.) singular, the nom. plural, and the nom. voc. and acc. dual; **-mn-, -n-** to the gen. singular and plural, gen. and dat. dual, and acc. plural; and **-m̃-, -ŋ-** to the dat. (= loc.) plural (§ 319). In Greek *ē* or *ō* regularly appears in the nom. singular. The oblique cases have generally levelled out the *e* or *o*, but in some words the *ē* or *ō* of the nominative was levelled out into the oblique cases, and in others the stem-form of the weak cases became generalized, as *ποιμήν, ποιμένα, ποιμένος* for **ποιμνος*; *δαίμων, δαίμονα, δαίμονος* for **δαιμνος*; *πευθήν, πευθήνος, κλύδων, κλύδωνος*; *κύων, κύνα, κυνί* for **κυονα, *κυονι*; *ἔρσην* regular gen. *ἄρσνός* to which was formed a new nominative *ἄρσην*, gen. *ἄρσενος*. Cp. the similar levellings in Lat. *homo, hominem, hominis, homine, hominēs, hominum, hominibus*; *sermo, sermōnem, sermōnis, sermōne*; *caro, carnem, carnis, carne*; and in Goth. *tuggō, tongue, acc. tuggōn, gen. tuggōns, dat. tuggōn*.

Singular.

| | | | | |
|--------------|--------------------------------------|-----------------|-----------------|--------------------------------|
| | Indg. | | | |
| Nom. | -ēn, -ōn } -ē, -ō } | <i>ποιμήν</i> | <i>δαίμων</i> | <i>rājā, king</i> |
| Voc. | -en, -on | <i>ποιμήν</i> | <i>δαῖμον</i> | <i>rājan</i> |
| Acc. | -en-m̃, -on-m̃ | <i>ποιμένα</i> | <i>δαίμονα</i> | <i>rājānam</i> |
| Gen. | -n-os, -n-es | <i>ποιμένος</i> | <i>δαίμονος</i> | <i>rājñah</i> |
| Dat. (=loc.) | -en-i, -on-i | <i>ποιμένι</i> | <i>δαίμονι</i> | <i>rājani,</i> <i>rājñi</i> |

Dual.

| | | | | |
|----------------|---------------------|------------------|------------------|------------------|
| Nom. Voc. Acc. | -en-e, -on-e | <i>ποιμένε</i> | <i>δαίμονε</i> | <i>(rājānāu)</i> |
| Gen. Dat. | ? | <i>ποιμένοιν</i> | <i>δαίμόνοιν</i> | |

Plural.

| | | | | |
|--------------|-----------------------|-----------------|-----------------|----------------|
| Nom. Voc. | -en-es, -on-es | <i>ποιμένες</i> | <i>δαίμονες</i> | <i>rājānah</i> |
| Acc. | -n-ŋs | <i>ποιμένας</i> | <i>δαίμονας</i> | <i>rājñah</i> |
| Gen. | -n-ōm̃ | <i>ποιμένων</i> | <i>δαίμόνων</i> | <i>rājñām</i> |
| Dat. (=loc.) | -ŋ-su | <i>ποιμέσι</i> | <i>δαίμοσι</i> | <i>rājasu</i> |

Singular: The nominative ended in the parent Indg. language in *-ēn*, *-ōn* beside *-ē*, *-ō*. The reason for this difference is unknown (cp. § 29). The former was generalized in Greek (but see § 341) and also in the Gothic masculines, as *guma*, *man*, with *-a* from older *-ēn* or *-ōn*; and the latter in Sanskrit, Latin and also in the Gothic feminines and neuters, as *homo*, *sermo*; *tuggō*, *tongue*, *haírtō*, *heart*.

The vocative originally ended in *-en*, *-on*, which occurs in Skr. *rājan* and in Gr. barytones with nominatives in *-ων*, as *δαῖμον*, *κύον*, *πέπον*. In the oxytones with nominatives in *-ών* and in all *-μεν*, *-εν*-stems the nominative came to be used for the vocative, as *ἡγεμών*, *ποιμήν*, &c. In Latin and Gothic the nominative was also used for the vocative.

The accusatives *ποιμένα*, *δαίμονα*, Lat. *hominem*, Goth. *guman* regularly correspond to the original stem- and case-ending. Forms like *ἀρνα* for **ἀρένα*, *κύνα* for **κύονα* = Skr. *svānam* were new formations after the analogy of the gen. singular and plural; and similarly Lat. *carnem* for **carinem*.

Regular forms of the genitive were *ἀρνός*, *κυνός* (= Skr. *śūnaḥ*), Skr. *rājñah*, Lat. *carnis*. The stem-forms *ἀρν-*, *κυν-* then became levelled out into all the cases except the nom. singular and dat. plural; and similarly with the Lat. stem *carn-*. *ποιμένος*, *δαίμονος*, &c. were new formations with *-εν-*, *-ον-* from cases like the accusative; and similarly Lat. *hominis*, Goth. *gumins*.

Regular forms of the original locative were *ποιμένι*, *δαίμονι*, &c., Skr. *rājani*, Lat. *homine*, Goth. *gumin*. Skr. *rājñi* was a new formation with *-jñ-* from the genitive.

Dual: The genitive and dative had *-en-*, *-on-* from the strong stem-forms. On the ending *-οιν* see § 325.

Plural: It has been assumed above that the accusative had originally the weak stem-ending *-n-* corresponding to *ἀρνας*, *κύνας* and Skr. *rājñah*, but the Greek forms prove

nothing because the weak stem-ending of these two words was generalized in prim. Greek (see gen. singular). And Skr. *rājñāḥ* may be a new formation after the analogy of the genitive. It is therefore not improbable that the accusative originally had the strong stem-ending *-en-*, *-on-* as in *ποιμένας, δαίμονας*, Lat. *hominēs* and in other languages. Goth. *gumans* is the nom. used for the accusative.

The regularly developed forms of the genitive were *ἀρνῶν, κυνῶν*, Skr. *rājñām*. *ποιμένων, δαιμόνων*, Lat. *hominum*, Goth. *gumanē* were new formations after the analogy of the nominative.

Skr. *rājasu* with *-asu* from *-ṅsu* represents the original locative. The *-a-* = Indg. *-ṅ-* was preserved in *φρασί* (beside the later new formation *φρεσί*) which occurs in Pindar and on an Attic inscription belonging to the beginning of the sixth century B. C., and also in *ἀρνάσι* for **ἀρασί* with *-ν-* from **ἀρνός*, &c. But in other words the dative was a new formation with the substitution of the vowel in the generalized stem-form for *-a-*, and with *-σι* from the dat. of consonantal stems where the *-σ-* was not originally intervocalic, as in *ποσσί, ποσί* from **ποτοσί* (§ 343), as *ποιμέσι, δαίμοσι, κλύδωσι* with *-εσι, -οσι, -ωσι* for *-ασι*; *κυσί* for **κυασί* after the analogy of *κυνός*, &c.

§ 346. Here may conveniently be placed: *χθών* from **χθώμ*, cp. *χαμαί*, Skr. *kṣāmi*, *on the ground*, *χιών* from **χιώμ*, cp. Lat. *hiems*, neut. *έν* from **σέμ*, cp. Lat. *sem-per*, where final *-μ* regularly became *-ν* (§ 141) and then the *-ν* was levelled out into the oblique cases, as gen. *χθονός, χιόνος, ένός* for older **χθομός, *χιόμος, *έμός*.

§ 347. Att. *μήν, χήν* were originally s-stems. Nom. Ion. *μείς*, Dor. *μήs* from **μενs*, older **μηνs* (§ 70), gen. Lesb. *μῆννος*, Att. Ion. Dor. *μηνός* from **μηνσος* (§ 216), from which was formed a new Attic nom. *μήν* after the analogy of the n-declension; and similarly prim. Greek **χās* from

**χανς*, gen. *χᾶνός*, *χηνός* from **χανσος* (§ 69, 2), from which was formed a new nom. Dor. *χᾶν*, Att. *χῆν*.

§ 348. Beside the stems *·men·*, *·mon·*, *·en·*, *·on·* there also existed in the parent Indg. language stems in *·(i)jen·*, *·(i)jon·* with the ablaut-grades *·(i)jēn·*, *·(i)jōn·*; *·(i)jen·*, *·(i)jon·*; *·in·*, *·īn·* and with the same distribution of the grades as in the *·men·*, *·mon·*-stems (§ 345). The original type of inflection was preserved in the Gothic *jan*-stems, as nom. *arbja*, *heir*, acc. *arbjan*, gen. *arbjins*, dat. *arbjin*. In Sanskrit the weak stem-ending *·in·* became generalized, as masc. nom. *balí* for **balyā*, *strong*; voc. *bálin*, acc. *balínam*, gen. *balínah*, loc. *balíni*. In Latin the *·(i)jōn* grade became generalized, as in *legio*, *legiōnem*, *legiōnis*, *legiōne*; and similarly in Greek words like *ἰθυππίων*, *μαλακίων*, *οὐρανίων*, gen. *·ίωνος*. But the weak stem-ending *·in·* became generalized in stems like *ἀκτῖν·*, *γλωχίν·*, *δελφίν·*, *θίν·*, *ρίν·*, gen. *·ίνος*; and similarly in Gothic feminine nouns like *managei*, *multitude*, gen. *manageins*. From the stem-form in *·in·* a new nominative was formed in prim. Greek after the analogy of the nominatives in *·s*. And then the *·ν·* disappeared (§ 154). At a later period new nominatives in *·ν* were formed after the analogy of the nominative of the *·men·*, *·mon·*, *·en·*, *·on·*-stems, as *γλωχίν*, *δελφίν*, *θίν*, *ρίν* beside *γλωχίς*, *δελφίς*, *θίς*, *ρίς*.

§ 349. From the generalized stem *μέλαν·* (gen. *μέλανος*) was formed the nom. *μέλας* older **μέλανς* (§ 154) after the analogy of the nominatives in *·s*. It is probable that this word originally belonged to the *o*-declension, cp. Skr. *malináh*, Indg. **melənos*, Gr. **μέλανος*, *black*, *dirty*, and *μελανό-χροος* beside *μελάγ-χροος*. *μέλαν·* may have come to be regarded as the stem in prim. Greek through the influence of the feminine *μέλαινα* from **μέλανja* (§ 322).

§ 350. The neuter nouns and adjectives were originally declined alike as in Sanskrit and Gothic, but in prim. Greek the generalized stem-form of the masculine became

used for the nom. voc. and acc. singular of the adjectives, as *τέρεν*, *ἄρσεν*, *πέπον*, *σῶφρον*, *μέλαν*. Nom. voc. and acc. plural *τέρενα*, *πέπονα*, *μέλανα*, &c. with *-a* = Skr. *-i*, Indg. *-ə* (§ 353).

The original declension of the nouns was preserved in Sanskrit and Latin, but in Greek all the inflected forms were new formations.

Singular.

| | Indg. | | | |
|----------------|-----------------------|-----------------|---------------|----------------|
| Nom. Voc. Acc. | <i>-mṇ</i> | <i>ὄνομα</i> | <i>nāma</i> | <i>nōmen</i> |
| Gen. | <i>-mn-os, -es</i> | <i>ὀνόματος</i> | <i>nāmnaḥ</i> | <i>nōminis</i> |
| Dat. (=loc.) | <i>-men-i, -mon-i</i> | <i>ὀνόματι</i> | <i>nāmani</i> | <i>nōmine</i> |

Dual.

| | | | |
|----------------|------------------|-----------------|---------------|
| Nom. Voc. Acc. | <i>-en-i, -ī</i> | <i>ὀνόματε</i> | <i>nāmanī</i> |
| Gen. Dat. | ? | <i>ὀνομάτων</i> | |

Plural.

| | | | | |
|----------------|-----------------------|-----------------|---------------|----------------|
| Nom. Voc. Acc. | <i>-mēn-ə, -mōn-ə</i> | <i>ὀνόματα</i> | <i>nāmāni</i> | <i>nōmina</i> |
| | <i>-men-ə, -mon-ə</i> | | | |
| Gen. | <i>-mn-ōm</i> | <i>ὀνομάτων</i> | <i>nāmnam</i> | <i>nōminum</i> |
| Dat. (=loc.) | <i>-mṇ-su</i> | <i>ὀνόμασι</i> | <i>nāmasu</i> | |

The endings in *ὄνομα*, *nāma*, *nōmen*, *name* correspond to the original ending of the nom. acc. singular. Latin generalized the stem-form *nōmen-*. The Sanskrit ending of the nom. plural corresponds to Indg. *-mōn-ə*, and the Latin ending to Indg. *-men-ə*, except that the *-a* for *-e* was from the nom. pl. of the neuter *o*-stems. The dual *ὀνόματε* had *-ε* from the masculines.

Prim. Greek probably had the generalized stem-form **ὀνομαν-* except in the dat. plural, as *ὄνομα*, **ὀνόμανος* for **ὀνομνος* = Skr. *nāmnaḥ*, **ὀνόμανι*; **ὀνόμανα*, **ὀνομάνων*, *ὀνόμασι* which can also be from **ὀνόματσι* (§ 166). It is difficult to account satisfactorily for the *-τ-* in historic Greek. It may have arisen from the Indg. adverbial particle *-tos* which occurs in *ἐκ-τός*, *ἐν-τός* = Lat. *in-tus*,

cp. also Skr. i-tāḥ, *inde*. In Sanskrit *taḥ* came to have the meaning of the ablative, as *nāma-taḥ*, *by name*, with which the gen. *ὀνόμα-τος* corresponds in form. *ὀνόματος* may then have come to be used for the gen. instead of the regular form **ὀνομος* = Skr. *nāmnaḥ*, and the *-τ-* of the gen. have become levelled out into all the inflected forms. But Brugmann's explanation (*Grundriss*, &c., vol. ii, second ed., p. 237) is probably the right one. He assumes that it probably arose from the blending of *-men-* and *-μη-to-* into one paradigm, as Lat. *strāmen* : *strāmina*, *strāminum* = **στρώματα*, **στρωμάτων* beside *strāmentum* : *strāmenta*, *strāmentōrum* = *στρώματα*, *στρωμάτων*. After the analogy of *στρώματα*, *στρωμάτων* beside **στρώματα*, **στρωμάτων* there were formed *στρώματος*, *στρώματι* beside **στρώματος*, **στρώμανι* and then all the forms with the stem **στρωμαν-* eventually disappeared. There is however a third possible explanation which has much in its favour, viz. that in the parent Indg. language consonantal and o-stems of the same word often existed side by side, as *τέρην* : *τέρενος*, *πίαρ* : *πιάρος*, *πούς* : *πέδον*, *cognōmen*, *strāmen* : *cognōmentum*, *strāmentum*. A large number of similar examples in the various languages has been collected by Brugmann in *Indogermanische Forschungen*, vol. ix, pp. 366-8. It is therefore quite possible that *-mēt-* existed beside *-mēt-o-* and that some of the Greek neuters in *-μα* originally ended in *-mēt* which became generalized, whereas Latin generalized *-mēt-o-*. *ὄνομα* may therefore stand for older **ὄνοματ* (§ 230) with *-τ-* regularly preserved in the inflected forms. Cp. *ὄνομα*, *στρώμα*, *ξέγμα* beside *cognōmentum*, *strāmentum*, *jūmentum* from **jouxmentom*.

3. STEMS ENDING IN *-nt*.

§ 351. To this class belong the masculine and neuter of all active participles except the perfect (§ 552).

a. THEMATIC PARTICIPLES.

§ 352. These comprise the participles of the present and second aorist together with a few isolated participles which were no longer used as such in the oldest Greek, as γέρων, ἐκών, κρείων (κρέων), μέδων, μέλλων. λέων was originally an n-stem which passed into this class owing to the nom. and voc. singular being alike in both declensions, cp. the feminine λέαινα, and Lat. leo, leōnis.

Singular.

| | Indg. | | | |
|--------------|------------|----------|-----------|----------|
| Nom. | -ont-s | φέρων | bháran | ferēns |
| Voc. | -ont | φέρων | bháran | (ferēns) |
| Acc. | -ont-ῃ | φέροντα | bhárantam | ferentem |
| Gen. | -ῃ-ος, -es | φέροντος | bhárataḥ | ferentis |
| Dat. (=loc.) | -ῃ-ι | φέροντι | bhárati | ferente |

Dual.

| | | | |
|----------------|--------|----------|-------------|
| Nom. Voc. Acc. | -ont-e | φέροντε | (bhárantāu) |
| Gen. Dat. | ? | φερόντοι | |

Plural.

| | | | | |
|--------------|---------|----------|-----------|-------------|
| Nom. Voc. | -ont-es | φέροντες | bhárantaḥ | (ferentēs) |
| Acc. | -ῃ-ς | φέροντας | bhárataḥ | ferentēs |
| Gen. | -ῃ-ῶν | φερόντων | bháratām | (ferentium) |
| Dat. (=loc.) | -ῃ-σι | φέρουσι | bháratsu | |

The strong form -ont- originally belonged to the nom. voc. and acc. singular and dual and the nom. plural, and the weak form -ῃ- to all the other cases. The original distinction between the strong and weak forms of the suffix was preserved in Sanskrit. But Greek generalized the -ont- and Latin the -ῃ- form. Some scholars assume that this class of words had -ont- in all the cases in the parent Indg. language, and that the Sanskrit forms with -at- =

Indg. *·ṇt·* were new formations after the analogy of the stems in *·went·* (§ 350), but this would not account for the Latin forms all of which point to the ablaut-grade *·ṇt·*.

The original nom. singular was **bhéronts*, *bearing*, which corresponds to Skr. *bhāran* with regular loss of the final *-ts*, and Goth. *baírand*s. Lat. *ferēns* was from **ferents* with *·ent·* from the gen., &c. *φέρων* was a new formation after the analogy of the *n*-stems. The new formation first took place in words like *έκόν*, *μέλλον* from **έκόντ*, **μέλλοντ* was like an *n*-stem. To *έκόν*, *μέλλον* a new masc. nom. *έκόν*, *μέλλον* was formed after the analogy of *πίον* : *πίων*. And then to the neuter *φέρον* a new masc. nom. *φέρων* was formed.

The vocative *φέρων* like Lat. *ferēns* was the nom. used for the vocative. The old voc. was preserved in forms like *γέρον*, *έκόν*, &c. and in Skr. *bhāran*. Dat. pl. *φέρουσι* from **φέροντσι*.

§ 353. The Indg. form of the nom. voc. and acc. singular neuter was **bhérnt* which became *bhārat* in Sanskrit. Lat. *ferēns* can also be from **bhérnt*, because *·ṇt·* would regularly become *·ēns* in Latin. Or it may simply be the masc. used for the neuter. *φέρον* from older **φέροντ* with *·οντ* from forms where it was regular.

The original form of the nom. voc. and acc. plural was **bhérontē* = *φέροντα*, Skr. *bhāranti*. Lat. *ferentia* like *ferentium* was a new formation after the analogy of the *i*-declension.

b. ATHEMATIC PARTICIPLES.

§ 354. Three categories are to be distinguished in the participles belonging to this class. (1) Participles which originally had *·ént·* in the strong and *·ṇt·* in the weak cases (§ 319). (2) Those which had *·ṇt·* in all cases. (3) Those which had *·nt·* in all cases. The first and second categories were preserved in Sanskrit, but the third was

remodelled after the analogy of the first. The original distinctions in the three categories were almost entirely obliterated in prim. Greek by analogical formations. The *-nt-*, which originally belonged only to the third category, was extended by analogy to all participles. And then the vowel preceding the *-nt-* was made the same as the vowel in the plural of the corresponding indicative. Examples are: (1) Skr. *krīṇ-ánt-* with *-ánt-* from **-ént-*, *krīṇ-at-* with *-at-* from *-nt-*: *krīṇāmi*, *I buy*, *krīṇánti*, *they buy*, but Gr. *δαμνάς* from **δαμναντς* for **δαμνευτς*, gen. *δαμνάντος* for **δαμνατος*: *δάμνημι*, *δάμναμεν*; Skr. *sunv-ánt-*, *sunv-at-*: *sunómi*, *I press out*, *sunvánti*, *they press out*; *δεικνύς* from **δεικνυντς* for **δεικνυευτς*, gen. *δεικνύντος* for **δεικνυατος*: *δείκνυμι*, *δείκνυμεν*. The only certain trace of the original ablaut-grade *-ént-* occurs in the Doric nom. pl. *έντες* from **sentes*, *being*, with *ε* for **ε* after the analogy of other parts of the verb; and similarly with the smooth breathing in Ion. *έων*, Att. *ών*. *έων*, *ών*, stem **sont-*, Skr. *sánt-*, *sat-*, *being*, and *ίών*, stem **iont-* for **jont-* (with *i-* for *j-* after the analogy of *ίμεν*, *ίτε*), Skr. *yánt-*, *yat-*, *going*, went over into the thematic declension in prim. Greek. This *-ont-* grade of ablaut was also preserved in the old isolated participle *δ-δούς* from **δ-δοντς*, gen. *δ-δόντος*, Skr. *dánt-*, *dat-*, *tooth*. ✓

(2) Skr. *dádat*, gen. *dádataḥ* with *-at-* from *-nt-*: *dā-dāmi*, *I give*, *dádati*, *they give*, but Gr. *διδούς* from **διδοντς* for **διδατς*, gen. *διδόντος* for **διδατος*: *δίδωμι*, *δίδομεν*; Skr. *dádhat*, gen. *dádhataḥ*: *dádhāmi*, *I put*, *place*, *dádhati*, *they put*, *place*, but *τιθείς* from **τιθεντς* for **τιθατς*, gen. *τιθέντος* for **τιθατος*: *τίθημι*, *τίθεμεν*; and similarly *ίστάς*, *ιστάντος*: *ίσταμεν*, and aorists active like *λύσας*, *λύσαντος*: *έλύσαμεν*, *έλυσαν*; *φήνās*, *φήναντος*: *έφήναμεν*, *έφηναν*.

(3) In this category the *-nt-* was originally preceded either by a long vowel in all the cases or by a long vowel in the

strong cases and by -ə- (= Gr. α, Skr. i, § 49) in the weak cases. To the former belong aorist active participles like γνούς from *γνουντς older *γνωντς (§ 70), gen. γνόντος : ἔγνων ; δρᾶς from *δραντς older *δρᾶντς, gen. δράντος : ἔδρᾶν ; and similarly the aorist passive participles in -εις, as φανείς : ἐφάνην, φανθείς : ἐφάνθη, λυθείς : ἐλύθη. And to the latter belong the aorist active participles δούς, θείς (Cret. κατα-θέης), στάς, from *δοντς, *θεντς, *σταντς, gen. δόντος,θέντος, στάντος : ἔδομεν, ἔθεμεν, ἔστημεν older *ἔσταμεν. The original inflection of these participles was nom. *dónts, *dhénts, *stántς, gen. *dántós, *dhántós, *stántós, and it is possible that δούς, θείς, gen. δόντος,θέντος represent the generalized forms *dónt-, *dhént- which would regularly become δοντ-,θεντ- (§ 70). στάς, στάντος can be from the strong stem *stánt- or the weak stem *stánt- (§ 49) ; and similarly with the old isolated participial form πᾶς from *παντς older *πᾶντς, gen. παντός, Indg. *kwántς, gen. *kwántós. The neuter πᾶν had ā from πᾶς, cp. πρόπαν.

§ 355. The nom. voc. and acc. neuter singular has the bare stem with regular loss of the final -τ (§ 230), as δαμνάν, δεικνύν, διδόν, τιθέν, ιστάν, λύσαν, γνόν, δόν, θέν, στάν, πᾶν with ā from πᾶς. The prim. Greek ending -ντ and the vowel preceding it were of the same origin as in the stem of the corresponding masculines.

The nom. voc. and acc. plural originally ended in -ə = -α, Skr. -i, as διδόντα, Skr. dáda(n)ti, *giving*.

4. STEMS ENDING IN -went.

§ 356. The suffix of the adjectives belonging to this class had originally two grades of ablaut. The strong form -went-, Skr. -vant-, Gr. -feντ- belonged to the nom. voc. and acc. singular and dual, and the nom. plural. The weak form -wnt-, Skr. -vat-, Gr. *-fat- belonged to all the other cases. Sanskrit preserved the original distinction

between the strong and weak form of the suffix, as acc. sing. *bhágavantam*, *blessed*, gen. *bhágavataḥ*. But in Greek the strong form *-φεντ-* was levelled out into all the cases except the dat. plural.

Singular.

| | Indg. | | |
|--------------|--------------|-----------|-------------|
| Nom. | -went-s | χαρίεις | bhágavān |
| Voc. | -went | χαρίεν | bhágavan |
| Acc. | -went-ṃ | χαρίεντα | bhágavantam |
| Gen. | -wnt-os, -es | χαρίεντος | bhágavataḥ |
| Dat. (=loc.) | -wnt-i | χαρίεντι | bhágavati |

Dual.

| | | | |
|----------------|---------|-----------|---------------|
| Nom. Voc. Acc. | -went-e | χαρίεντε | (bhágavantāu) |
| Gen. Dat. | | χαρίέντου | |

Plural.

| | | | |
|--------------|----------|-----------|-------------|
| Nom. Voc. | -went-es | χαρίεντες | bhágavantaḥ |
| Acc. | -wnt-ns | χαρίεντας | bhágavataḥ |
| Gen. | -wnt-ōm | χαρίέντων | bhágavatām |
| Dat. (=loc.) | -wnt-su | χαρίεσι | bhágavatsu |

The nom. singular may originally have ended in *-wēnt-s* corresponding to the Sanskrit ending *-vān*. The ending *-eis* can be from either prim. Gr. *-φηντ-s* (§ 70) or *-φεντ-s* (§ 69, 1). The prim. Greek dat. pl. was **χαριφατσι* which became **χαριφετσι* through the influence of the *ε* in *-φεντ-*. Then **χαριφετσι* regularly became *χαρίεσι* through the intermediate stage **χαρι(φ)εσσι* (§ 166). Of like origin is the *ε* in the fem. *χαρίεσσα*, prim. Gr. **χαριφατja*, and in *χαρίεστερος*, *χαρίεστατος*.

§ 357. The regular form of the nom. voc. and acc. neuter singular would have been **χαρία* from **χαριφατ*, cp. Skr. *bhágavat*. *χαρίεν* from **χαριφεντ* was a new formation with *-φεντ* for *-φατ* as in the gen. singular, &c.

The nom. voc. and acc. plural *χαρίεντα* was from **χαρι-φεντα*, cp. Skr. *bhágavanti*, with *-φεντα*, Skr. *-vanti* from Indg. *-wentə*.

5. STEMS ENDING IN A LIQUID.

§ 358. The only stem ending in *-l* is *ἄλς* (*ἄλλα*, *ἄλός*, &c.) which regularly has *-s* in the nominative.

STEMS ENDING IN *-r*.

§ 359. To this class belong: (1) The nouns of relationship *πατήρ*, *μήτηρ*, *θυγάτηρ* and *δᾱήρ* from **δαιϕηρ* (§ 57); *φράτηρ*, *φράτωρ* = Skr. *bhrátar*-, *brother*, became isolated from this category owing to their change in meaning. (2) The nomina agentis, as *δοτήρ*, *δῶτωρ*, *γενετήρ*, *γενέτωρ*, *ρήτήρ*, *ρήτωρ*, &c. (3) A few other nouns which belong to neither of these two categories, as *ἄήρ*, *αἰθήρ*, *ἄθήρ*, *ἄστήρ*, *γαστήρ*, *ἄνῆρ*, and the monosyllables *θήρ*, *φῶρ*.

The stem-endings originally had various grades of ablaut in the different cases, as *-tēr*, *-tōr*; *-ter*-, *-tor*·; *-tr*· before vowels, but *-tr̥*· before consonants, and similarly *-ēr*-, *-er*·, *-r*·, *-r̥*·. The alternation between *ē* and *ō* was the same as in the *n*-declension (§ 345). In the weak case-forms the vowel disappeared and then the *-r*· remained consonantal or became vocalic according as the next syllable began with a vowel or a consonant, as *πατρός*, *πατρῶν*, *πατράσι*, cp. Skr. *pitṛ̥ṣu*. *-tēr*, *-tōr*, *-ēr* regularly belonged to the nom. singular only; *-ter*·, *-tor*·, *-er*· to the voc. acc. and dat. (= loc.) singular, the nom. plural, and the nom. voc. and acc. dual; *-tr*·, *-r*· to the gen. singular and plural, gen. and dat. dual, and acc. plural; and *-tr̥*·, *-r̥*· to the dat. (= loc.) plural. In Greek *ē* or *ō* regularly appears in the nom. singular. In the nouns of relationship the original distinction between *-tēr*·, *-ter*·, *-tr*·, *-tr̥*· was preserved in Sanskrit and also in Greek apart from the new formations

explained below, but in Latin the weak stem-ending *-tr* became generalized in the oblique cases.

The *nomina agentis* were originally declined like the nouns of relationship as in Sanskrit, but in Latin *-tōr* became generalized. In Greek the *-η* of the nom. of nouns ending in *-τηρ* was levelled out into all the cases, as *δοτήρ, ρητήρ, σωτήρ*, gen. *δοτήρος, ρητήρος, σωτήρος* except that the voc. of *σωτήρ* was *σῶτερ*; and similarly the monosyllable *θήρ, θηρός*. Those ending in *-τωρ* generalized the ablaut-grade *-τορ*, as *δώτωρ, ῥήτωρ*, gen. *δώτορος, ῥήτορος*; and similarly *φράτωρ, φράτορος*. In *μήστωρ, μήστωρος* and the monosyllable *φῶρ, φωρός* the *-ω* of the nom. was generalized.

§ 360.

Singular.

| | Indg. | | | |
|--------------|--------------------|---------------|----------------|---------------|
| Nom. | <i>-tēr, -tē</i> | <i>πατήρ</i> | <i>pitā</i> | <i>pater</i> |
| Voc. | <i>-ter</i> | <i>πάτερ</i> | <i>pítar</i> | <i>pater</i> |
| Acc. | <i>-ter-m</i> | <i>πατέρα</i> | <i>pitáram</i> | <i>patrem</i> |
| Gen. | <i>-tr-os, -es</i> | <i>πατρός</i> | <i>pitúr</i> | <i>patris</i> |
| Dat. (=loc.) | <i>-ter-i</i> | <i>πατέρι</i> | <i>pitári</i> | <i>patre</i> |

Dual.

| | | | |
|----------------|---------------|----------------|--------------------|
| Nom. Voc. Acc. | <i>-ter-e</i> | <i>πατέρε</i> | (<i>pitárāu</i>) |
| Gen. Dat. | ? | <i>πατέροι</i> | |

Plural.

| | | | | |
|-----------|----------------|----------------|--------------------|-------------------|
| Nom. Voc. | <i>-ter-es</i> | <i>πατέρες</i> | <i>pitárah</i> | (<i>patrēs</i>) |
| Acc. | <i>-tr-ns</i> | <i>πατέρας</i> | (<i>pitṛñ</i>) | <i>patrēs</i> |
| Gen. | <i>-tr-ōm</i> | <i>πατρῶν</i> | (<i>pitṛñām</i>) | <i>patrum</i> |
| Dat. | <i>-tr-su</i> | <i>πατράσι</i> | <i>pitṛṣu</i> | |

The nom. singular ended in the parent Indg. language in *-tēr* beside *-tē* (cp. § 29). The reason for this difference is unknown. The former was generalized in Greek, Latin and the Germanic languages and the latter in Sanskrit and

the Baltic-Slavonic languages. The Greek stem- and case-endings of the inflected forms given above correspond to the Indg. stem- and case-endings except the acc. and dat. plural. It is possible that the accusative originally had the stem-ending *-ter-* corresponding to *πατέρας*. *πατράσι* had *-σι* from the dat. of consonantal stems where the *-σ-* was not originally intervocalic as in *ποσσί*, *ποσί* (§ 342). On the final *-ι* see § 316. Beside the regular forms the nouns of relationship often have analogical formations in the oblique cases, especially in the gen. and dat. singular and gen. plural, as Hom. *πατέρος*, *μητέρος*, Hom. and Att. *πατέρων*, *θυγατέρος* with the substitution of *-τερ-* for *-τρ-* after the analogy of the strong stem-endings and vice versa *πατρί*, *θύγατρα*, *θύγατρεις*.

Like *πατήρ* was also declined *γαστήρ*. The regular inflection of *άνήρ* was *άνήρ*, *άνερ*, *άνερα*, *άνδρός*, *άνερι*; *άνερε*, *άνδροιν*; *άνερες*, *άνδρας* or *άνερας*, *άνδρων*, *άνδρασι*. *-νρ-* regularly became *-νδρ-* (§ 152) in the weak stem-forms. *άνερος* for *άνδρός* was formed after the analogy of forms like *άνερ*, *άνερα*; and similarly *άνδρα*, *άνδρί*, *άνδρε*, *άνδρες* after forms like *άνδρός*, *άνδρων*.

δάήρ (voc. *δαερ*), *φράτηρ*, *άήρ*, *αιθήρ*, *άθήρ* and *άστήρ* generalized the strong stem-endings *-τερ-*, *-ερ-* in all the oblique cases, as gen. *δάερος*, *φράτερος*, *άερος*, *αιθέρος*, *άθέρος*, *άστερος*, but dat. pl. *άστρασι*.

§ 361.

Singular.

| | | | | | |
|--------------|--|----------------|----------------|----------------|---------|
| | Indg. | | | | |
| Nom. | <i>-tēr, -tōr</i> <i>-tē, -tō</i> } | <i>δοτήρ</i> | <i>δώτωρ</i> | <i>dātā</i> | dator |
| Voc. | <i>-ter, -tor</i> | <i>δοτήρ</i> | <i>δῶτορ</i> | <i>dātar</i> | dator |
| Acc. | <i>-ter-ṃ, -tor-ṃ</i> | <i>δοτήρα</i> | <i>δῶτορα</i> | <i>dātāram</i> | datōrem |
| Gen. | <i>-tr-os, -es</i> | <i>δοτήρος</i> | <i>δῶτορος</i> | <i>dātūr</i> | datōris |
| Dat. (=loc.) | <i>-ter-i, -tor-i</i> | <i>δοτήρι</i> | <i>δῶτορι</i> | <i>dātāri</i> | datōre |

Dual.

Nom. Voc. Acc.

-ter-e, -tor-e δοτῆρε δώτορε (dātāraū)

Gen. Dat.

? δοτήροιν δωτόροιν

Plural.

Nom. Voc. -ter-es, -tor-es δοτῆρες δώτορες dātārah datōrēs

Acc. -tr-ns δοτήρας δώτορας (dātṛn) datōrēs

Gen. -tr-ōm δοτήρων δωτόρων (dātṛnām) datōrum

Dat. (=loc.)

-tr-su δοτήρσι δωτόρσι dātṛṣu

On the levelling out of the ablaut-grades -τηρ-, -τορ- see § 359. On the ending of the nom. singular in Sanskrit see § 360. The -ā- in Skr. dātāram, *giver*, dātāraū, dātārah is of the same origin as in rājānam (§ 345). Beside the gen. case-endings -os, -es the parent Indg. language had also -s (§ 302) which occurs in dātūr, pitūr; -rs regularly became -ur through the intermediate stages -ṛš, -ṛž, -ṛr. The acc. and gen. plural dātṛn, pitṛn, dātṛnām, pitṛnām were new formations after the analogy of the i- and u-declensions (Thumb, *Handbuch des Sanskrit*, § 302). The regular forms would have been *dātārah, *pitārah, *dātṛām, *pitṛām. The old gen. was preserved in Vedic narām = *ἀνδρῶν*.

§ 362. It is difficult to account satisfactorily for Att. Ion. χεῖρ and the inflected forms, because it is not certain what was the original stem. The most probable explanation is that beside the stem χερ- there once existed a stem χερι- with nom. acc. dual χεῖρε from *χερje. From the dual a new nominative singular Att. Ion. χεῖρ was formed. Att. then generalized the -ει-, as χεῖρα, χεῖρός, χεῖρί; χεῖρες, χεῖρας, χεῖρῶν, but χεροῖν, χερσί from stem χερ-. And Ion. generalized the stem χερ-, as χεῖρα, χεῖρός, χεῖρί;

χέρες, χέρας, χερῶν, χερσί, but Hom. χείρεσι, -εσσι from χεῖρ-. The nom. χέρς in Timocreon 9 was, like Att. μάρτυς from *μάρτυς, a new formation after the analogy of the nominatives in -s.

6. S-STEMS.

§ 363. The s-stems contain masculine, feminine and neuter nouns and adjectives. They can be conveniently divided into five sub-divisions: (a) The large class of neuter nouns with the ablaut-grades -es-, -os-. (b) Nouns and adjectives of the type δυσμενής. (c) Nouns with the ablaut-grades -ōs-, -os-. (d) The comparative of adjectives with the ablaut-grades -jes-, -jos-, -jōs. (e) Neuter nouns with the stem-ending -əs.

a. NEUTER STEMS IN -es-, -os-.

§ 364. To this sub-division belongs a large number of nouns in Greek, Sanskrit and Latin. In the Germanic languages nearly all of them went over into other declensions. They originally had either the strong grade of ablaut in the root and the weak in the stem-ending or the weak grade in the root and the strong in the stem-ending. A comparison of the forms in the various languages shows that this original distinction must have become obliterated during the prim. Indg. period by the ablaut-grade -es- being levelled out into all the inflected forms.

Singular.

| | Indg. | | | |
|----------------|-------------|----------------|--------------------|---------|
| Nom. Voc. Acc. | -os | γένος | jānaḥ, <i>race</i> | genus |
| Gen. | -es-os, -es | γένεος, γένους | jānasaḥ | generis |
| Dat. (=loc.) | -es-i | γένει, γένει | jānasi | genere |

Dual.

| | | | |
|----------------|-----------|-----------------|--------|
| Nom. Voc. Acc. | -es-i, -i | γένει, γένεε | jānasi |
| Gen. Dat. | ? | γενοῖν, γενέοιν | |

Plural.

| | | | | |
|----------------|--------------|-----------------|----------|---------|
| Nom. Voc. Acc. | -es-ə, -ōs-ə | γένεα, γένη | (jánāsi) | genera |
| Gen. | -es-ōm | γενέων, γενῶν | jānasām | generum |
| Dat. (=loc.) | -es-su | γένεσσι, γένεσι | jánaḥsu | |

Intervocalic *-s-* disappeared in prim. Greek (§ 213, 2), but became *-r-* in Latin. In Sanskrit *-es-* and *-os-* regularly fell together in *-as-* (§ 42). The Ionic uncontracted and the Attic contracted forms correspond to the Indg. stem- and case-endings except γένει and γένεε. The *-i* in the Ionic trisyllabic form γένει was due to the influence of datives like ποδί. The dual γένει represents an older γένεε which is common in manuscripts. γένεε from older *γένεσε had *-ε* after the analogy of forms like δυσμενέε, πόδε. Hom. has γένεσσι beside γένεσι (§ 212, 2). After the analogy of γένεσσι the ending *-εσσι* became used to form the dative plural of *i*-, *u*-, and of all kinds of consonantal-stems. In Homer even forms like ἐπέεσσι occur owing to the stem being regarded as ἐπέ-. Sanskrit jánāsi (with nasalized *-ā-*) was a new formation after the analogy of the *nt*-stems. The regular form would have been *jánāsi or *jánasi. jánaḥsu = jánassu.

§ 365. Att. φῶς, *light* = Hom., &c. φάος from *φαφος, gen. φάους from *φαφοσος, Hom. dat. φάει from *φαφεσι, nom. pl. φάεα from *φαφεσα. The other cases were formed after the analogy of the dental stems, as φωτός, φωτί, pl. φῶτα, φῶτων.

There seems to have been in prim. Greek two forms for the word *ear*, οὖς from *ῶς, older *ούσος and Dor. Ion. ῶς from Indg. *ō(u)s (§ 63). Hom. οὐατος, οὐατα, οὐασι, from *ούσατος, &c. after the analogy of the stems in *-μα* (§ 350), and Attic, &c. ὠτός, ὠτί, pl. ὠτα, ὠτων, ὠσί (also Hom.) from the form ῶς after the analogy of the dental stems. οὖς, οὐατος, &c. had the smooth for the rough breathing after the analogy of ῶς, ὠτός, &c. See § 219.

b. *δυσμενής*.

§ 366. Nouns and adjectives of the type *δυσμενής*, *ill-affected*, *hostile*, Skr. *durmanāḥ*, *dispirited*, only exist in Greek and Sanskrit. And originally they occurred only in compounds. Simple forms like *μυγής*, *φραδής*, *ψευδής* beside *συμμυγής*, *ἀφραδής*, *φιλοψευδής* were back-formations made direct from the compounds. These compounds are closely related to the neuter stems in *-es-*, *-os-*, the *-es-* having become generalized in the parent Indg. language, cp. *ἀμενής*, *δυσμενής*, *εὐμενής* : *μένος*, *εὐγενής* : *γένος*, *ἀψευδής* : *ψεῦδος*.

Singular.

| | Indg. | | |
|--------------|--------------------|------------------------|-------------------|
| Nom. | <i>-ēs</i> | <i>δυσμενής</i> | <i>durmanāḥ</i> |
| Voc. | <i>-es</i> | <i>δυσμενές</i> | <i>durmanah</i> |
| Acc. | <i>-es-m̃</i> | <i>δυσμενέα, -ῆ</i> | <i>durmanasam</i> |
| Gen. | <i>-es-os, -es</i> | <i>δυσμενέος, -οῦς</i> | <i>durmanasah</i> |
| Dat. (=loc.) | <i>-es-i</i> | <i>δυσμενεῖ, -εῖ</i> | <i>durmanasi</i> |

Dual.

| | | | |
|----------------|--------------|-------------------------|-----------------------|
| Nom. Voc. Acc. | <i>-es-e</i> | <i>δυσμενέε, -εῖ</i> | (<i>durmanasāu</i>) |
| Gen. Dat. | ? | <i>δυσμενέοιν, -οῖν</i> | |

Plural.

| | | | |
|--------------|----------------|------------------------|-------------------|
| Nom. Voc. | <i>-es-es</i> | <i>δυσμενέες, -εῖς</i> | <i>durmanasah</i> |
| Acc. | <i>-es-ns</i> | <i>δυσμενέας</i> | <i>durmanasah</i> |
| Gen. | <i>-es-ōm̃</i> | <i>δυσμενέων, -ῶν</i> | <i>durmanasām</i> |
| Dat. (=loc.) | <i>-es-su</i> | <i>δυσμενέσι</i> | <i>durmanahsu</i> |

The intervocalic *-s-* regularly disappeared (§ 213, 2). The *-ῆς* of the nom. singular is a lengthening of the stem-ending *-es-*. It is improbable that the original ending was *-ēs-s*. The *ī* in *δυσμενεῖ* is of the same origin as in *γενεῖ* (§ 364). Apart from the dat. plural all the other forms

both contracted and uncontracted represent the original stem- and case-endings. *δυσμενέσι*, older *δυσμενέσσι*, on the final -ι of which see § 316. In Attic the nom. plural was used for the accusative. In Attic the compounded proper names in -κράτης, -μένης, -σθένης, -φάνης and also other compounds often had -ην in the accusative after the analogy of the masculine ā-declension. This also occurred occasionally in the Ionic, Aeolic, Cretan, Arcadian and Cyprian dialects. And in like manner the Attic genitive, and more rarely the dative, were sometimes formed after the analogy of the ā-declension. The Lesbian voc. gen. and dat. endings -ε, -η, -η were also similar analogical formations.

§ 367. The original ending of the nom. voc. and acc. neuter singular was -es, as in *δυσμενές* = Skr. *durmanah*; and of the plural -es-ə as in *δυσμενέα*, -ῆ.

c. STEMS IN -ōs, -os-.

§ 368. These nouns had originally the ablaut-grades -ōs, -os-, but the -os- became generalized in prim. Greek in the inflected forms. Nouns of this type occur only in Greek, Latin and Sanskrit.

Nom. *γέλως*, *ἔρως*, *ιδρώς*, *αἰδώς*, voc. *αἰδοῖ* for **αἶδος* after the analogy of *πειθοῖ* (§ 341), acc. *αἰδῶ* from **αἶδοσα*, Hom. *ιδρῶ*, gen. *αἰδοῦς* from **αἶδοσος*, dat. *αἰδοῖ* from **αἶδοσι*; and similarly acc. *αἰῶ* from **αἶφοσα* beside *αἰῶνα*: nom. *αἰών*, gen. *αἰῶνος*. Cp. O.Lat. *arbōs*, *arbōrem* beside *honōs*, *honōrem* with -ō- of the nom. levelled out into the oblique cases. *γέλως*, *ἔρως* and *ιδρώς* were generally declined after the analogy of the dental stems (§ 342), gen. *γέλωτος*, *ἔρωτος*, *ιδρώτος*; also Att. acc. *γέλων*, Hom. dat. *γέλφ*, *ιδρφ* after the analogy of the o-stems (§ 327), acc. *γέλω* after the analogy of the ōu-stems (§ 340).

Hom. *ἠώς* from **āusōs*, cp. Skr. *uśāh*, *dawn*, Lat. *aurōr-a* from **āusōs-ā* with -ā from the ā-declension, voc.

ῥοῖ after the analogy of *πειθοῖ* (§ 341), acc. ῥῶ from *ῥοσα, Skr. uśásam, gen. ῥοῦς from *ῥοσος, Skr. uśásah, dat. ῥοῖ from *ῥοσι, Skr. uśási. Attic ἔως from ῥῶς (§ 71) went over into the so-called Attic second declension (§ 327).

d. THE COMPARATIVE OF ADJECTIVES.

§ 369. One of the numerous ways of forming the comparative of adjectives in the parent Indg. language was by means of a suffix with the ablaut-grades *-jes-*, *-jos-*, *-jōs-*, *-is-*. The grades *-jes-* and *-jos-* regularly fell together in *-jas-* (§ 42) in Sanskrit. In Latin *-jos-* only occurs in the nom. voc. and acc. neuter, as O.Lat. *majos*, later *majus*. In all the other forms of the masculine, feminine and neuter *-jōs-*, which originally belonged only to the masculine nom. singular, became generalized, as O.Lat. *majōs*, *noviōs*, acc. *majōrem*, *noviōrem*. In Greek *-jes-*, *-jōs-* do not occur at all, and *-jos-* only occurs in three forms, viz. in the acc. singular masculine and feminine, as *μείζω*, Ion. *μέζω* from *μέγjοσα, Indg. *μέgjosm̥, masc. and fem. nom. plural *μείζους*, *μέζους* from *μέγjοσες, neut. nom. acc. plural *μείζω*, *μέζω* from *μέγjοσα with *-a* = Indg. *ə*. See § 375.

e. NEUTER STEMS IN *-əs-*.

§ 370. Nouns of this type are found only in Greek and Sanskrit. *-əs-*, Gr. *-ας-*, Skr. *-iṣ-* is the weak grade of the *-ōs* in paragraph 368, but the *-əs-* grade became generalized already in the parent Indg. language.

Singular.

| | Indg. | | |
|----------------|----------------------------|-----------------------------|--------------------------------|
| Nom. Voc. Acc. | <i>-əs</i> | <i>γέρας</i> | <i>havīḥ</i> , <i>oblation</i> |
| Gen. | <i>-əs-os</i> , <i>-es</i> | <i>γέρας</i> , <i>γέρως</i> | <i>havīṣah</i> |
| Dat. (= loc.) | <i>-əs-i</i> | <i>γέραϊ</i> , <i>γέραι</i> | <i>havīṣi</i> |

Dual.

| | | | |
|----------------|-----------|----------------|--------|
| Nom. Voc. Acc. | -əs-i, -ī | γέραε, γέρᾱ | haviṣī |
| Gen. Dat. | ? | γεράοιϛ, γερῶν | |

Plural.

| | | | |
|----------------|---------|-----------------|----------|
| Nom. Voc. Acc. | -əs-ə | γέραα, γέρᾱ | (haviṣī) |
| Gen. | -əs-ōm̃ | γεράων, γερῶν | haviṣām |
| Dat. (=loc.) | -əs-su | γέρασσι, γέρασι | haviḥṣu |

The dat. γέραι and dual γέραε, γέρᾱ were new formations of the same kind as in γένει and γένει, γένει (§ 364). On the -i in γέρασσι see § 316. The remaining Ionic uncontracted and the Attic contracted forms are normally developed from the corresponding Indg. stem- and case-endings. But most of the nouns belonging to this class were also declined after the analogy of the stems in -μα (§ 350), as πέρατος, τέρατος, κέρατος from *κέραατος, pl. πέρατα, τέρατα, κέρατα. Poetic forms like Hom. οὔδεος, οὔδει, οὔδει; κέρεος, κέρει, pl. κέρεια; Att. βρέτεος, pl. βρέτη, βρετέων were formed after the analogy of the corresponding cases of γένος (§ 364). The -ā in the nom. acc. plural of forms like γέρᾱ, κρέᾱ beside the regular forms γέρᾱ, κρέᾱ was due to the analogy of the nom. acc. of other consonantal stems. It is difficult to explain datives like κρέᾱ, γήρᾱ which occur in Attic texts. They seem to be new formations after the analogy of the dat. of the ā-declension, but it is not clear how the change could have come about.

THE r : n-DECLENSION.

§ 371. The parent Indg. language had a declension of neuter nouns which consisted of the blending of two stems. The stem of the nom. and acc. singular generally ended in one of the ablaut-grades -er (Skr. -ar, Lat. -er); -ōr (Gr. -ωρ); and -r̥ (Gr. -αρ, Lat. -ur), but also occasionally in -r̥ + a consonant, as Skr. áhar, *day*, ūdhar, *udder*, Lat. iter; ἔλωρ, πέλωρ, ὕδωρ; ἥπαρ, οὔθαρ, Lat. femur, jecur; Skr.

yákr̥t, *heart*, *ásrk̥*, *blood*. The stem of the oblique cases ended in *-n* or *-ṇ*, as gen. Skr. *áhn-aḥ*, *údhn-aḥ*, *udn-áh*, of *water*, Gr. *ῥπα-τος*, *ῥδα-τος*, Lat. *feminis*, **itinis*, **jecin-
nis* (*femoris*, *iteris*, *itineris*, *jecoris*, *jecinoris* were ana-
logical formations through the mixing of the two stems);
Skr. *jakn-áh*, *asn-áh*.

This declension was best preserved in Sanskrit and Greek, in the other languages one or other of the stems mostly became generalized, as in Lat. *über*, OE. *ūder*, *udder*; OE. *wæter* beside Goth. *watō* (dat. *watin* = Skr. *udáni*), *water*; and similarly in the three Greek words *ἔαρ* from **φεσαρ* (gen. *ἔαρος*), Lat. *vēr*; *πῦρ*, gen. *πυρός* beside Goth. *fōn*, *fire*, gen. *funins*; *θέναρ*, gen. *θέναρος*.

Many of the words belonging to this declension are found in Greek only in the nom. and acc. singular, as *ἄλκαρ*, *εἶλαρ*, *ἔλαρ*, *ῥναρ*, *πέλαρ*, *πίαρ*, *τέκμαρ*, *τέκμωρ*, *ῥπαρ*. Inflected forms of the following nouns occur, all of which were formed after the analogy of the stems in *-μα* (§ 350): *ἄλαρ*, from **ἄλεφαρ*, *ἄλειφαρ*, *δέλαρ* from **δελεφαρ*, *εἶδαρ* from **έδφαρ*, *ῥμαρ*, *ῥπαρ*, Hom. *ῥνειαρ* read *ῥνηαρ* from **ῥνᾱφαρ*, *οὔθαρ*, *πεῖραρ* from **περφαρ*, *σκῶρ*, *στέαρ*, *ῥδωρ*, *φρέᾱρ* from **φρηφαρ* (cp. § 72).

Many attempts have been made to explain the origin of this declension, but none of them are satisfactory. The original inflexions were better preserved in Vedic than in classical Sanskrit. The declension of Vedic *áhar*, *day* and Greek *ῥπαρ* will serve as models for all nouns belonging to this class. The stem- and case-endings of the inflected forms in both languages correspond to those of the neuter n-declension (§ 350).

Singular.

| | | |
|----------------|---------------|--------------------|
| Nom. Voc. Acc. | <i>ῥπαρ</i> | <i>áhar</i> |
| Gen. | <i>ῥπατος</i> | <i>áhnaḥ</i> |
| Dat. (= loc.) | <i>ῥπατι</i> | <i>áhani, áhan</i> |

| | | |
|----------------|----------------|-------|
| | <i>Dual.</i> | |
| Nom. Voc. Acc. | ἦπατε | áhānī |
| Gen. Dat. | ἡπάτοιιν | |
| | <i>Plural.</i> | |
| Nom. Voc. Acc. | ἦπατα | áhāni |
| Gen. | ἡπάτων | áhnām |
| Dat. (=loc.) | ἦπασι | áhasu |

CHAPTER X

ADJECTIVES

A. THE DECLENSION OF ADJECTIVES

§ 372. The development of grammatical gender in nouns was older than in adjectives, but adjectives had before the close of the prim. Indg. period come to be inflected for number, gender and case like nouns. At an earlier period there must however have been a stage when the bare stem of the adjective was used along with the noun without anything to indicate its number, gender and case, something like Modern English which has got rid of the superfluous luxury of inflexion and gender. After the *ā*-stems of nouns had become characteristic of the feminine gender, and the *o*-stems of the masculine and neuter genders (§ 295), the adjectival *o*-stems began to have inflexions for number, gender and case after the analogy of such nouns when used along with them as attributes. Nouns of the type γόνος : γονή, τόμος : τομή with like meaning in both genders, and words like *ékwoś, Lat. equus : *ékwā, Lat. equa, were probably also an important factor in the development. At a still later period the adjectives of the type -os, -ā, -om (-os, -ā, -η ; -ον, Skr. -ah, -ā, -am, Lat. -us, -a, -um) came to be used along with nouns belonging to the *i*, *u*, diphthongal- and consonantal-declensions. The

development of the feminine gender in the other adjectival stems went parallel with the formation of the feminine gender in the corresponding substantival stems, i. e. they were formed after the analogy of the *jā*-stems (§ 322). The adjectives of this type then acquired the gender and inflexion of the corresponding masculine and neuter nouns and became used along with all kinds of nouns.

§ 373. In Greek the adjectives are declined like the corresponding nouns, but as we have seen above the feminine of the *u*-, *n*- and *nt*-stems is declined like a *jā*-stem. There is however a large number of adjectives in Greek, which has only one ending (*-os*) for the masculine and feminine. The adjectives of this type are partly compound and partly simple. They were originally nouns, denoting living beings possessing the characteristic implied in the word, which later came to be used as adjectives, as *ροδοδάκτυλος*, lit. *a man with rosy fingers*; *θυμοβόρος*, lit. *soul-devourer*; *λάλος*, lit. *a chatterer, babbler*; *ἥσυχος*, lit. *a quiet, gentle kind of man*; and similarly *ἐκηλος*, *ἡμερος*, *ἵλαος*, *λάβρος*, *λοιδορος*, &c. After the analogy of such adjectives, simple adjectives which were not originally nouns denoting living beings came to have only the two endings, *-os*, *-ον*, as *ἔωλος*, *νύκτερος*, *χέρσος*, &c. The gender of compound nouns was determined by the second element. When such compound nouns came to be used attributively in apposition to other nouns (cp. John Lackland) they became adjectival and were inflected like ordinary adjectives, except that they preserved their original masculine ending when used along with a feminine noun, as *ροδοδάκτυλος ἡώς*; and similarly neuter compounds like **καλλίσφυρον*, *beautiful ankle*, when they became adjectives, had *-os* for both the masculine and feminine. But when the second element of the compound was originally an adjective, it regularly had the three endings. The adjectives of this type had sometimes however only two endings after the analogy of

the first type. The compound adjectives in *-ής* like *δυσμενής* (§ 366) never had different forms for the masculine and feminine. On the simple adjectives like *μυγής*, *φραδής*, *ψευδής*, see § 366.

NOTE.—The inflexion of contracted adjectives like *ἀπλοῦς* from *ἀπλόος* was regular in the masculine and neuter except in the nominative and accusative neuter plural. The feminine *ἀπλή* (for **ἀπλῶ* from *ἀπλόη*), &c. and *ἀπλᾶ* (for **ἀπλῶ* from *ἀπλόα*) were formed after the analogy of forms like *σοφής*, &c. and *σοφά*.

§ 374. In the following adjectives the declension is made up of the blending together of two different stems: nom. acc. masc. sing. *πολύς*, *πολύν*, neut. *πολύ*, stem *πολύ-*, and fem. nom. sing. *πολλή* from **πολ(φ)ῖᾱ*, gen. *πολλῆς* from **πολ(φ)ῖᾱς*, from which was formed a masc. and neut. stem **πολ(φ)ῖο-* = *πολλο-* for all the other forms of the masculine and neuter. The old forms of the *u*-stem were preserved in Hom., as *πολέος*, *πολέες*, *πολέας*, *πολέσι*. And similarly nom. acc. masc. sing. *μέγας*, *μέγαν*, neut. *μέγα*, and fem. nom. sing. *μεγάλη* from which was formed a masc. and stem *μεγάλο-* for all the other forms of the masculine and neuter.

B. THE COMPARISON OF ADJECTIVES

I. THE COMPARATIVE DEGREE.

§ 375. The parent Indg. language had several suffixes by means of which the comparative degree was formed. But in the individual branches of the parent language one of the suffixes generally became more productive than the rest, and in course of time came to be the principal one from which the comparative was formed, the other suffixes only being preserved in isolated forms.

The oldest and most original mode of forming the comparative of adjectives in prim. Indo-Germanic was by

means of the suffix *-jes-* with the ablaut-grades *-jos-*, *-jōs-* and *-is-*, which was added direct to the root-syllable. The root-syllable originally had the strong grade of ablaut. This suffix became the normal one in Latin for the formation of the comparative (§ 369), but in Greek and the Germanic languages it practically remained unproductive. In the oldest Sanskrit it was more productive than in the later language. In classical Sanskrit only a limited number of comparatives occur with this suffix. *-is-* the weak grade form of the suffix occurs in Latin adverbs like *magis*, *nimis*, *satis*, and in Gothic adverbs like *mins*, *less*, *waírs*, *worse*, from **minniz*, **wirsiz*. *-jes-*, *-jōs-* do not occur at all in Greek, and *-jos-* only occurs in three forms of the declension, viz. in the masc. and fem. acc. singular, as *μείζω*, Ion. *μέζω* from **μέγιοσα*, Indg. **mégjosm*, masc. and fem. nom. plural *μείζους*, *μέζους* from **μέγιοςες*, and neut. nom. acc. plural *μείζω*, *μέζω* from **μέγιοσα*. And similarly *βάσσω*, *βράσσω*, *γλύσσω*, *έλάσσω*, *ήττω* (*ήσσω*), *θάσσω*, *κρέσσω*, *μάσσω*, *πάσσω*. From these and similar forms a new nom. *μέζων*, *μέζον*, *βάσσων*, *βάσσον* was formed after the analogy of *ήδιων*, *ήδιον* : *ήδίω*, which then came to be declined like *ήδιων*. Why the stem-vowel was long in Att. *μείζω*, *κρείττω*, *έλάττω*, *θάττω*, but short in the corresponding Ionic forms, is still an unsolved problem. Beside the suffix form *-jes-*, *-jōs-* there was also in prim. Indg. the suffix form *-ī-jes-*, *-ī-jōs-*, the *ī*, *ī* of which stood in ablaut relation to each other. The *-ī-* was preserved in Greek, but Sanskrit generalized the *-ī-*, as Skr. *svādiyas-*, *sweeter*; masc. and fem. acc. singular *ήδίω*, masc. and fem. nom. plural *ήδιους* (also used for the acc.), neut. nom. acc. plural *ήδίω*, from **σφᾶδιγιοσα*, **σφᾶδιγιοςες*, **σφᾶδιγιοσα*, beside *καλλίω* from **καλλιγιοσα*, *έχθίω*, *ρήίω*. All the other forms of the declension in Greek were formed from the weak grade *-is-* + an *n*-suffix with the ablaut-grades *-en-*, *-on-*, *-ōn* (§ 345), as *ήδιων*, *ήδιονα*, *ήδιονος*, neut. *ήδιον*,

from *σῤῥᾱδισων, *σῤῥᾱδισονα, *σῤῥᾱδισονος, *σῤῥᾱδισον, pl. ἡδῖνες, neut. ἡδῖονα, from *σῤῥᾱδισονες, *σῤῥᾱδισονα; and similarly in Goth. masc. nom. sūt-iz-a, *sweeter*, acc. sūt-iz-an, gen. sūt-iz-ins. The -i- was generally long in Attic poetry and short in Doric and the old epic poetry. This fluctuation between the long and short -i- was due to the levelling out of ι or ῑ in the forms where it was regular, as in ἡδῖω, ἡδῖους beside ἡδῖων, ἡδῖονα, &c., ἐχθῖω, καλλῖω, ῥῖω. The feminine of this type of comparative was originally formed as a jā-stem (§ 322), as Skr. nāv-jas-ī, *newer*, gār-īyas-ī, *heavier*, but in Greek and Latin the masculine became also used for the feminine.

NOTE.—From what has been said above it will be seen that the Greek declension of words of the type ἡδῖων is made up of the two different stem-forms *σῤῥᾱδ-ῖος- and *σῤῥᾱδ-ισ-ον-, which originally had different meanings. The former denoted the adjectival form of the comparative, *sweeter*, and the latter the substantival, *the sweeter*. But this original distinction in the meaning of the two stem-forms was obliterated in prim. Greek whereby the substantival form became adjectival. And similarly in the Germanic languages, as Goth. sūt-iz-a (acc. sūt-iz-an, gen. sūt-iz-ins) which originally meant *the sweeter*.

§ 376. The secondary suffixes -ero-, -tero- were originally confined to words relating to place and to certain pronominal forms, as Skr. úparaḥ, ádharah, *lower*, Lat. s-uperus, inferus; Goth. unsar, *our*, izwar, *your*. Skr. kataráh, πότερος, Goth. hwarar, *which of two*; ἡμέτερος, ὑμέτερος, Lat. noster, vester; Lat. exterus, dexterus. The suffix -ero- remained unproductive in all the languages. The suffix -tero- remained unproductive in Latin and the Germanic languages, but in Greek and Sanskrit it had become in the prehistoric periods of these languages the ordinary suffix for the formation of the comparative of adjectives. The -tero- was originally added to the ad-

verbial form, which in the *i*-, *u*- and consonantal-stems was identical with the neuter singular, as *ρήϊ-τερος*, *ὕψι-τερος*; *γλυκύ-τερος*, *ὀξύ-τερος*; *μελάν-τερος*, *χαριέσ-τερος* from **χαριφεντ-τερος*; *πενέσ-τερος* from **πενετ-τερος*; *μακάρ-τερος*; *ἀληθέσ-τερος*, *εὐμένεσ-τερος*; Skr. *śúci-tarah*, *prurer*; *cāru-tarah*, *dearer*; *bhágavat-tarah* (stem *bhagavant-*), *more blessed*; *tavás-tarah*, *stronger*; *παλαί-τερος*, *μεσαί-τερος* which at a later period came to be felt as being formed from *παλαιός*, *μέσος*, and then after the analogy of these were formed such comparatives as *γεραί-τερος*, *ἡσυχαί-τερος*, *ισαί-τερος*, *μυχαί-τερος*, *σχολαί-τερος*, *πλησιαί-τερος*. And in like manner from such comparatives as *χαριέσ-τερος*, *ἀληθέσ-τερος*, the *-εσ-τερος* was abstracted and used for forming comparatives like *σωφρον-έσ-τερος*, *εὐδαιμον-έσ-τερος*, *ἄσμεν-έσ-τερος* : *ἄσμενος*, *εὐνούσ-τερος* from **εὐνο-εσ-τερος* : *εὐνους*. And similarly from comparatives like *ἀχαρίς-τερος* : *ἄχαρις*, *-ιτος*, *γαστρίσ-τερος* : *γάστρις*, was extracted the *-ίσ-τερος*, which became used for forming comparatives like *λαλ-ίσ-τερος* : *λάλος*, *πτωχ-ίσ-τερος* : *πτωχός*, *βλᾱκ-ίσ-τερος* : gen. *βλᾱκός*, *κλεπτ-ίσ-τερος* : *κλέπτης*.

In the ordinary formation of the comparative of *o*-stems, as in *ἀξιό-τερος*, *σοφώ-τερος* beside *κουφό-τερος*, *πικρό-τερος*, *πονηρό-τερος*, *σεμνό-τερος*, *κενό-τερος*, *στενό-τερος* from older **κενφό-τερος*, **στενφό-τερος*, there is a difference of opinion among scholars about the explanation of the *-ω* beside *-ο*-. Some scholars assume that the *-ο*- became *-ω*- in prim. Greek by rhythmic lengthening when the preceding syllable was short, but that it remained short when the preceding syllable was long by nature or position. Other scholars maintain, and probably rightly, that the comparative of *o*-stems was formed precisely in the same manner as in the other stems, that is, from the adverbial form which in the *o*-stems was originally the ablative (§ 303) of the adjective used adverbially and accordingly

ended in *-ω*. This explanation agrees with the formation of the comparative in the Germanic languages (cp. Goth. *swinþō-z-a* : *swinþs*, *strong*), where the *-ō* can have no connexion with what is called rhythmic lengthening. It is therefore probable that all comparatives of *o*-stems had originally *-ω* irrespective of the quantity of the preceding syllable. The *-ω* only remained in those comparatives in which a succession of short syllables would have arisen by the substitution of *-o*. In other cases the comparative came to be formed direct from the *o*-stem of the adjective after the analogy of the *i*-, *u*- and consonantal-stems. Then the relation of *-ω* to *-o* gave rise to what is improperly called rhythmic lengthening.

2. THE SUPERLATIVE DEGREE.

§ 377. The superlative, like the comparative degree, was formed in the parent Indg. language by means of several suffixes. But in the individual branches of the parent language one of the suffixes generally became more productive than the rest, and in the course of time came to be the principal one from which the superlative was formed, the other suffixes only being preserved in isolated forms. The principal suffixes were :

1. *-to-* which was only preserved in the formation of ordinal numerals, as *ἕκτος*, Skr. *ṣaṣṭhāḥ*, Lat. *sextus*, Goth. *saīhsta*, *sixth* ; *δέκατος* from **dekmtos*.

2. *-is-to-*. This suffix is made up of *-is-* the weak grade of the comparative suffix *-jes-* (§ 375), as in Lat. *magis*, and the *-to-* which occurs in ordinal numerals like *ἕκτος*, &c. In the comparative the root-syllable originally had the strong grade of ablaut, but in the superlative the weak grade with the accent on the ending of the suffix *-is-tó-*, cp. *κρείσσων*, *ὀλείζων* (inscriptional form) beside *κράτ-ιστος*, *ὀλίγ-ιστος*. This original distinction became almost entirely obliterated in Greek and Sanskrit by analogical formations.

The suffix disappeared completely in Latin, but became productive in the Germanic languages, and also in Greek and Sanskrit for those adjectives which had *-ων*, *-ῖων*, *-ī(y)as* in the comparative, as *μείζων*, *μέζων* : *μέγ-ιστος* = Skr. *māhīyas* : *māh-iṣṭhaḥ*; *ῥῥῖων* : *ῥῥ-ιστος* = Skr. *svādīyas* : *svād-iṣṭhaḥ*, Goth. *sūt-ists*, *sweetest*.

3. *-ῃ-ο-*, *-m-o-*, which like *-to-* appears chiefly in ordinal numerals, as Skr. *daśamāḥ*, Lat. *decimus*, from **dekṃ-os*, *tenth*; Lat. *summus* from **sup-mos*, *infimus*; Skr. *upamāḥ*, *uppermost*; *adhamāḥ*, *lowest*; Goth. *fruma*, *first*; *innuma*, *innermost*. It remained unproductive in Greek, and almost so in Latin, Sanskrit and the Germanic languages. *-ῃ-ο-* would have become *-αμ-ο-* (§ 65, 2) in Greek, but it was supplanted by the *-ατος* in *ἐνατος*, *δέκατος*, from **newṃtos*, **dekṃtos*, as *ἔσχατος*, *μέσσατος*, *νέατος*, *ὑπατος*. This change of *-αμ-ο-* to *-ατ-ο-* was doubtless also partly due to the influence of the suffixal ending *-to-*.

4. *-ῃ-ο-* which appears in ordinal numbers, as Skr. *saptamāḥ*, Lat. *septimus*, from **septṃ-os*, *seventh*. Skr. *āntamāḥ*, *next*; *uttamāḥ*, *highest*, *best*. In Latin and the Germanic languages it was only preserved in isolated forms, as Lat. *intimus*, *extimus*, *ultimus*, *optimus*, *dextimus*; Goth. *aftuma*, *next*, *posterus*; *iftuma*, *the following*, *next*. In Sanskrit it was productive and became the regular superlative ending *-tama-ḥ* to adjectives which formed their comparative in *-tara-ḥ* (§ 376), as *cārutaraḥ*, *dearer* : *cārutamaḥ*; *tavāstaraḥ*, *stronger* : *tavāstamaḥ*. *-ῃ-ο-* would have become *-ταμ-ο-* in Greek, but *-ταμ-ο-* became *-τατ-ο-* in the prehistoric period of the language through the influence of forms like *ἐνατος*, *δέκατος* and the *-τος* in the superlative ending *-ιστος*. *-τατ-ο-* then became the ordinary superlative suffix for adjectives which had *-τερο-* in the comparative.

3. IRREGULAR COMPARISON.

§ 378. It is a peculiarity of all the Indg. languages that certain adjectives, especially those denoting *good*, *bad*, *great*, *small*, *much*, *little*, do not admit of a comparative and a superlative being formed directly from them. It is usually said that such adjectives are defective or that they form their comparatives and superlatives from a different root than the positive or that the comparatives and superlatives have no positives with which they are etymologically related. The real explanation is that such adjectives escaped from being brought into the grammatical system of comparison. In the early prim. Indg. period the comparative and superlative stood in no grammatical relation to the so-called positive. It was not until a relatively late period of the prim. Indg. language that the comparative and superlative came to be associated grammatically with what we call the positive. The forms in *-jes-* (§ 375) and *-is-to-* (§ 377, 2) originally partook of the nature of participles or verbal adjectives and denoted that the verbal action was especially prominent in the object with which they stood attributively, as Vedic *táriyas-*, *easily piercing through*, Gr. *φέρϊστος*, lit. *bringing best*. After such forms had also become purely nominal they were brought into relation with adjectives which were not comparative in form and which in regard to the comparative forms were called the positive. The forms in *-ero-*, *-tero-* (§ 376) were originally confined to words relating to place and to certain pronominal forms, and were primarily used to express contrast of comparison, as **upero-s*, *above and not below*, **ndhero-s*, *below and not above*, *δεξιτερό-s*, *the right and not the left* (*ἀριστερό-s*), *ἡμέτερο-s*, *our and not your* (*ὑμέτερο-s*), *θηλύτερο-s*, *feminine and not masculine* (Arcad. *ἀρρέντερο-s*). Then e.g. forms like **newotero-s* (*νεώτερος*), *new*, became used not only in contrast with **senotero-s*, *old*, but also

with the contrasted meaning *not so new, less new*, and then *older*. At this stage **senotero-s* became associated to **seno-s* (ἐνος). These formations thus came into the sphere of gradation which the *-jes-* forms already possessed and entered into competition with them. Although the two pairs of suffixes had originally different meanings, the difference entirely disappeared already in prim. Greek so far as the comparison of adjectives was concerned. After the three-membered series of gradation had been established in which the positive was regarded as the fundamental form, comparative and superlative forms began to be created from all kinds of adjectives, see Brugmann, *Grundriss*, §c., vol. ii (second ed.), pp. 654-60, and Delbrück in vol. iii, pp. 411-15.

ἀγαθός : ἀμείνων, ἀρείων, βελτίων, βέλτερος, κρείττων, κρείσσω, Ion. κρέσσω, φέρτερος, λῶν, λῶν, λώτερος : ἄριστος, βέλτιστος, βέλτατος, κράτιστος, κάρτιστος (: κρατός), φέρτατος, φέριστος, λῶστος. ἀμείνων has the pure diphthong -ει- and therefore cannot be from *ἀμενίων. It is probably not a comparative in form. κρείττων, κρείσσω probably had -ει- from ἀμείνων.

κακός : χείρων from *χερσών, χερείων from stem χερεσ-, cp. χέρηες, χειρότερος, χερειότερος, ἥττων, ἥσσω : χείριστος, ἥκιστος.

πολύς : πλείων with -ει- from the superlative, πλέων from stem πλε-, Att. πλείν (neut.) was a remodelling of *πλεις from *plēis : πλείστος from *plēis-to-s.

μικρός : μείων, ἐλάττων, ἐλάσσω (: ἐλαχύς) : μείστος, ἐλάχιστος.

C. NUMERALS

I. CARDINAL.

§ 379. The cardinal numbers one to nineteen were adjectival, one to four being declinable and five to nineteen indeclinable, but in eleven to fourteen the units were

originally declined. The decades and the words for hundred and thousand were originally substantives.

§ 380. The parent Indg. language had several words with slightly different meanings to express the idea of *one*. In the ordinary Greek word for *one* four stem-forms are to be distinguished: ~

(a) *sem-. Masc. nom. Att. Ion. εἷς, Dor. ἦς, Cret. ἔνς, from *σεμς, neut. ἑν from *σεμ; masc. and neut. gen. ἐνός for *ἐμός with -ν- from the nominative (§ 346), and similarly, ἐνί, cp. Lat. sem-per.

(b) *som-. ὁμός, *one and the same*, Skr. sama-, Goth. sama, *same*.

(c) *sm-. ἄμα; ἄ-παξ, Lat. sem-el, Skr. sa-kṣt, *once*; ἄ-πλοῦς, Dor. ἄ-τερος; ἐ-κατόν and Att. ἑ-τερος for *ἄ-κατόν, *ἄ-τερος with ἐ- for ἄ- from ἑν. See § 290.

(d) *sm-. Fem. nom. sing. μία from *σμία (§ 322), cp. μῶνυξ for *σμῶνυξ, *having one hoof*.

Indg. *oinos, οἶνός, οἶνή, οἶνη, *the ace on dice*, O.Lat. oinos, later ūnus, Goth. áins, OE. ān, *one*.

Indg. *oiwos, O.Pers. aiva-, *one*, οἶος, *alone, by oneself*, Cypr. οἶφος, *alone*.

Fem. Hom. Lesb. and Thessalian ἵα, Hom. gen. ἱῆς, dat. ἱῆ, and Hom. neut. dat. ἱῶ were probably of pronominal origin; cp. § 411.

§ 381. Indg. *duwō(u), *dwō(u) was inflected like a dual. Hom. δύω (indeclinable) from *δύφω = Vedic dūvá(u) beside *δφω = Skr. dvā, in δώδεκα; gen. dat. δυοῖν probably from a plural form *δυοῖσιν. The original nom. acc. neuter was *duwoi = Vedic duvé, prim. Gr. *δυφοι which became δύο when the next word began with a vowel (§ 229). δύο then became generalized and indeclinable for all genders in Att. Dor. &c. and often also in Homer. In some dialects, e. g. in Herodotus, it became inflected like a plural just as in Latin and the Germanic languages, as Herod. δυῶν, δυοῖσι, Ion. also δυῶν, δυσί after the analogy of τριῶν, τρισί.

Indg. *dwi-, *di- in compounds with -i- after the analogy of *tri-, as in *δί-πους*, Skr. *dvi-pád-*, Lat. *bi-pēs*, OE. *twi-fēte*, *two-footed*.

§ 382. Masc. and fem. nom. Att. &c. *τρεῖς*, Cret. *τρέες*, Skr. *tráyaḥ*, Lat. *trēs*, from *trejes; acc. Cret. *τρίνς*, Ion. Dor. Boeot. *τρίς*, Goth. *þrins*, from *trins, Att. *τρεῖς* like Lat. *trēs* was the nom. used for the accusative; nom. acc. neut. Indg. *trī, Vedic *trí*, on *τρία*, Lat. *tria*, Goth. *þrija*, see § 329; gen. *τριῶν*, Lat. *trium*, from *trijōm; dat. *τρισί*, Skr. *triśú*, Lith. *trisè*.

Indg. *tri- in compounds, as *τρί-πους*, Skr. *tri-pád-*, Lat. *tri-pēs*, OE. *þri-fēte*, *three-footed*.

§ 383. The Indg. word for *four* had various grades of ablaut in the stem-ending of the different cases, as masc. nom. *qetwores, Skr. *catvāraḥ*, Lat. *quattuor*, Goth. *fidwōr*, Dor. and North-West Gr. *τέτορες* with -τ- from *τετρώκοντα* (§ 386), Att. *τέτταρες*, Hom. *τέσσαρες*, Boeot. *πέτταρες* with -α- from the dative, Ion. *τέσσερες* for -ορες by assimilation, Hom. *πίσυρες* with -υ- from the acc. and genitive; acc. masc. *qeturns, Skr. *catúraḥ*, Hom. *πίσυρας*; Att. *τέτταρας* with the first -α- from the dative; nom. acc. neut. *qetworē, Skr. *catvāri*, Att. *τέτταρα*, Hom. *τέσσαρα*, Boeot. *πέτταρα* with -α- from the dative, Lesb. *πέσσυρα*, *πίσυρα* with -υ- from the genitive; gen. *qeturōm, Lesb. *πισύρων*; Att. *τετάρων* with -α- from the dative; dat. = (loc.) *qetwrsu, poet. *τέτρασι* from *τέτφρασι, Att. *τέτταρσι*.

Indg. *q(e)twr- beside *q(e)tru- in compounds, as in *τετρά-ζυγος* from *τετφρα-, *τρά-πεζα*, beside *τρυ-φάλεια*.

§ 384. Indg. *pénqe, *πέντε*, Skr. *pāñca*; Aeol. *πέμπε*, Lat. *quinque*, O.Ir. *cōic*, Goth. *fimf*, OE. *fif*, all with assimilation of consonants. In compounds *πεντε-* beside *πεντα-* with -α- from forms like *ἐπτά*, *δέκα*.

Indg. *s(w)eks = prim. Gr. *σφέξ, Lac. *φέξ*, beside *σέξ = Att. Ion. Dor. Boeot. &c. *ἕξ*, Lat. *sex*, O.Ir. *sē*, Goth.

sañs, Skr. śaś with unexplained initial ś-. In compounds éḡ- beside éḡa- with -a- from ἐπτά, &c.

Indg. *septm, ἐπτά, Vedic saptá, classical Skr. śapta, Lat. septem, O.Ir. secht, Goth. sibun.

Indg. *októ(u), which is dual in form, ὀκτώ, Elean ὀπτῶ after the analogy of ἐπτά, Lesb. Boeot. ὀκτό, probably like δύο the old neut. form, Skr. aṣṭá(u), Lat. octō, Goth. ahtáu.

Indg. *néwn beside *énwn, the former occurs in Skr. náva, Lat. novem with -m for -n after the analogy of septem, decem, cp. nōnus, Goth. niun, and the latter in Ion. εἰνά-νυχες, εἰνά-ετες, εἰνα-κόσιοι, from *énva-. énnéa has never been satisfactorily explained. Some scholars assume that it stands for *én vεfa, lit. *nine in all*, and others that it arose from a contamination of *énva and *vεfa = Skr. náva. In compounds εἰνα- beside énnεα-, as in εἰνά-νυχες beside énnεά-μηνος.

Indg. *dekṃ, δέκα, Skr. dáśa, Lat. decem, O.Ir. deich, Goth. taíhun.

§ 385. In the cardinals eleven to nineteen the units originally preceded the decade, as in ἑν-δεκα where ἐν- is the nom. acc. neuter, Lat. ūn-decim from *oinom-decem, Skr. ékā-dāśa; δώ-δεκα (Hom. δυνά-δεκα) where δω- is the masc. form beside Hom. δύο καὶ δέκα (δυο-καί-δεκα), Lat. duo-decim, Skr. dvā-daśa; Lat. trē-decim from *trēs-decem, Skr. tráyō-daśa, but from thirteen onwards only with καὶ in Greek, as τρεῖς or τρία καὶ δέκα. But in Greek and Latin the units could follow the decade, as δέκα εἰς, δέκα δύο, δέκα τρεῖς, Lat. decem et ūnus, decem et trēs, decem trēs, decem novem. δέκα δύο, δέκα τρεῖς, &c. were used when the substantive or a larger number preceded, but δυο-καί-δεκα, τρεῖς καὶ δέκα when the substantive followed, as δραχμαὶ δέκα τρεῖς, but τρεῖς καὶ δέκα δραχμαί. The units in eleven to fourteen ceased to be inflected in the prehistoric period of most languages. A remnant

of the inflected forms of the units occurs in *τριακαίδεκα* where *τρεις*, prim. Gr. **τρως*, is the masc. accusative. ✓

§ 386. The Indg. word for *twenty* was a dual form **wĩ-kmti*, lit. *both decades*. The expressions for *thirty* to *ninety* originally meant *three decades*, *four decades*, &c. The unit and the word for *decade*, a neuter substantive **komt-* from **dkomt-* and related to **dékm*, *ten*, were both inflected so far as the units were declinable and governed the following substantive in the genitive case. Regular forms were: **tri komtə*, *thirty*; **qetworə komtə*, *forty*; **peŋqe komtə*, *fifty*. Various new formations seem to have taken place already in the parent language, thus after the analogy of **tri komtə* were formed **qetwř komtə* = Ion. Dor. *τετρώκοντα* (§ 88), Lat. *quadrā-gintā*; **peŋqē komtə* = *πεντήκοντα*, Skr. *pañcā-śāt*, the *-η* of which was extended in Greek to *έξήκοντα*, *έβδομήκοντα*, Att. *όγδοήκοντα* (but Hom. *όγδώκοντα* = Lat. *octō-gintā*), Hom. *έννήκοντα*, Att. Ion. also Hom. *ένενήκοντα*; and similarly in Lat. *quīnquā-gintā*, *sexā-gintā*, *nōnā-gintā* with medial *-ā* from *quadrā-gintā*.

Indg. **wĩ-kmti*, Dor. Boeot. Elean, Pamphylian and Arcadian *ῥι-κατι*, Skr. *vi-śatīḥ*, Lat. *vi-gintī*, O.Ir. *fiche*, *twenty*; Att. Ion. &c. *είκοσι* from **εῖῑ-κοσι* with prothetic *ε*- and *-ο*- for *-α*- after the analogy of the other decades. Att. &c. *τριάκοντα*, Ion. *τρίήκοντα*, for **τριάκοντα* after the analogy of *τετρώκοντα*, *πεντήκοντα*. The original form of the unit was preserved in Lat. *tri-gintā*. The old neuter of the unit occurs in *τεσσαρά*, *τετταρά*, Boeot. *πετταράκοντα*. It is difficult to explain why the Greek first element of the decades for seventy to ninety should contain the ordinal instead of the cardinal form of the unit. With *έννήκοντα*, *ένενήκοντα*, cp. Lat. *nōnā-gintā* beside masc. *nōnus* from **nowenos*. All the decades became adjectival in construction in prim. Greek.

§ 387. The Indg. word for *hundred* was **kmtóm*, lit.

a decade of tens, corresponding to Skr. śatám, Lat. centum, O.Ir. cēt, Goth. hund, and -κατόν in ἐ-κατόν, lit. *one hundred*, with ἐ- for ἄ- after the analogy of ἔν. It was a neuter substantive, related to *dékṃ, *ten*, and governed the gen. case as in Sanskrit and the Germanic languages, but in Greek and Latin it had become adjectival in construction in the prehistoric period of the languages.

The hundreds from two to nine hundred were originally expressed in two ways. (a) Either both members were inflected for two, three and four hundred, and the second member only for the others, as in Skr. dvé śaté = Indg. dual *dwoi kṃtoi, Goth. *two hunda, two hundred*; Skr. páñca śatáni, Goth. *fimf hunda, five hundred*; and similarly in the Keltic and the Baltic-Slavonic languages. (b) Or both members formed a compound without either of them being inflected, as in Skr. dvi-śatám, *two hundred*, tri-śatám, *three hundred*; O.Lat. du-centum aurī, *argentī ses-centum*, but already at an early period the hundreds became plural adjectives and were inflected as such, as ducentī homines, ducentae mulieres. To this manner of forming the hundreds also belong the prim. Greek compound forms: *δι-κατον, *τρι-κατον, *τετρα-κατον, *πεντα-κατον, *ἑξά-κατον, *ἑπτα-κατον, *ὀκτω-κατον, *ἐνφα-κατον. When the second element of these compound nouns became adjectival in meaning there was formed beside *-κατον an adjectival form -κατιοι, -αι, -α = Dor. Boeot. -κατιοι, Arcad. -κασιοι, Att. Ion. Lesb. -κοσιοι with -ο- from -κοντα, and then various analogical formations took place in the first element of the compounds. τρι- became τριᾶ-, Ion. τριῃ- after the analogy of τριᾶ-κοντα; δι- became δια-, Ion. διῃ- after τριᾶ-; and ὀκτω- became ὀκτα- after ἑπτα-, &c. The forms thus became Att. διᾶ-κόσιοι, τριᾶκόσιοι, Ion. διῃκόσιοι, τριῃκόσιοι, τετρακόσιοι, πεντακόσιοι, ἑξάκόσιοι, ἑπτακόσιοι, ὀκτακόσιοι, ἑνα-, εἰνα-κόσιοι.

§ 388. If we compare the word for *thousand* in the various languages we see that it is practically impossible to determine what was the original form of the word for *thousand* in the parent Indg. language, cp. Lat. neut. *mille*, O.Ir. fem. *míle*, Goth. fem. *þūsundi*, Lith. masc. *tūkstantis*, O.Slav. fem. *tysešta*, Skr. neut. *sa-hásram*, lit. *one thousand*, where *sa-* = Indg. *sm-* (§ 380), prim. Gr. neut. **χεςλον* = Skr. *-hásram*, Indg. **gheslom*. **χεςλον* became adjectival in meaning in prim. Greek, and then from it was formed the adjectival form **χεςλιοι*, -αι, -α = Ion. Boeot. *χέλιοι*, Lesb. *χέλλιοι*, Dor. *χίλιοι*, Att. *χίλιοι*, which corresponds in form to the Sanskrit adjective *sa-hasríya-*.

2. ORDINAL.

§ 389. The ordinal numbers in the various languages were with few exceptions superlatives in form and were formed from the cardinal numbers with the same suffixes which we have already had in the formation of the superlative of adjectives (§ 377).

§ 390. The word for *first* was not related to the word for *one* in any of the languages, as *πρῶτος*, Dor. *πῤῶτος* either from **πρωf-ατος* with -ατος from forms like *τέτρατος*, *δέκατος* and related to Skr. *pūrvah*, *pūrvyáh*, *prior*, *first*, or from **πρω-ατος* : *πρό*, Skr. *prá*, *before*, *in front of*; Lat. *primus* from **pris-mos* : adv. **pris*, *pruus*, Goth. *fruma*, *prius*, *first*. Hom. *πρώτιστος* like Goth. *frumists* was a double superlative.

δεύτερος denoted originally *standing off from anything, at a distance from, inferior in rank* and is related to the verb *δεύομαι* and to Skr. *dávīyah*, *farther*; Skr. *dvi-tíyah* : *dvi*, *two*; Lat. *secundus* : *sequor*; Lat. *alter*, Goth. *anþar*, Lith. *añtras* all lit. meaning *the other* as compared with *one who is first*. *δεύτατος* with -ατος as in *τέτρατος*.

τρίτος, Lesb. *τέτρος* = Lat. *tertius*, Goth. *þridja*. Hom.

τρί-ατος after the analogy of τέτρατος, δέκατος, and similarly Hom. ἐβδόματος, ὀγδόατος.

τέταρτος from *τέτφατος, Hom. τέτρατος, Boeot. πέτρατος, Skr. caturthāḥ, OE. fēo(we)rþa, Indg. *qetwrtós.

πέμπτος (Cret. πέντος from *πενττος, older πέμπτος, cp. ἑπτά = ἑπτά), Lat. quīntus, OE. fifta, Lith. penktas, Indg. *penqtós; Skr. pañcathāḥ beside pañcamāḥ.

ἕκτος, Skr. śaṣṭhāḥ, Indg. *s(w)ektós; Lat. sextus and Goth. saihsta were formed direct from sex, saihis.

ἕβδομος (§ 107) probably for older *ἑβδαμος, Skr. sapta-māḥ, Lat. septimus, Indg. *septm-ós, *? sebdmós, Hom. ἐβδόματος, see τρίτος.

ὀγδοος from *ὀγδοφος with the mediae -γδ- after the analogy of ? ἕβδομος, Skr. aṣṭamāḥ; Hom. ὀγδόατος, see τρίτος.

ἔνατος, Hom. εἷνατος from *ένφατος, Indg. *enwntós beside Lat. nōnus, Skr. navamāḥ with -m- from daśamāḥ, Indg. *newn-ós.

δέκατος (Lesb. Arcad. δέκοτος with -ο- from -κοντα), Goth. taíhunda, Indg. *dekmtós beside Skr. daśamāḥ, Lat. decimus, Indg. *dekṃ-ós.

§ 391. The ordinals from eleventh to nineteenth could be formed in two ways: (a) Either with the cardinal units + the ordinal for *tenth*, as ἐνδέκατος, δωδέκατος (Hom. δυωδέκατος), these two forms were used in all the dialects; and similarly in Lat. undecimus, duodecimus, Skr. ekā-daśāḥ, dvā-daśāḥ or -daśamāḥ. In this way were also formed the other ordinals in Ion. and Boeotian, as τρισκαίδέκατος, τεσσαρες-, τεσσαρακαίδέκατος, πεντεκαίδέκατος, ἑκκαίδέκατος, ἑπτακαίδέκατος, ὀκτωκαίδέκατος, ἑννεακαίδέκατος; and similarly Skr. trayō-daśāḥ, *thirteenth*, catur-daśāḥ, *fourteenth*, pañca-daśāḥ or -daśamāḥ, *fifteenth*, &c. (b) Or with ordinals in both components, as τρίτος καὶ δέκατος, τέταρτος καὶ δέκατος, &c.; and similarly Lat. tertius decimus, quartus decimus, &c.; Goth. fimfta-taíhunda, *fifteenth*, with the first element uninflected.

§ 392. The original second element of the ordinals of the tens was **kmt-tós* beside **kmt-tm-ós*, the former occurs in Boeot. *ἑκαστός* (§ 110), Att. *εἰκοστός* from **ἑφικοστός* with the first -o- for -a- after the analogy of *τριακοστός, -κοντα*. The other ordinals were formed in prim. Greek either direct from the stem of the corresponding cardinal + -τός, thus **τριακοντ + τός* became **τριακονστός* (§ 110) and then later *τριακοστός* (§ 153), or else with -κοστός for **-καστός* = Indg. **kmt-tós*, with the first -o- for -a- after the analogy of *-κοντα*; and similarly *τεσσαρα-, τετταρα-, τετρωκοστός, πεντηκοστός, ἑξηκοστός, ἑβδομηκοστός, ὀγδοηκοστός, ἑνενηκοστός*; beside Lat. *vīcēsīmus, vīgēsīmus, tricēsīmus, trīgēsīmus, quadrāgēsīmus, quīnquāgēsīmus, &c.* = Skr. *viṣatitamāḥ, triṣattamāḥ, catvārīṣattamāḥ, pañcāśattamāḥ, &c.*, from Indg. **kmt-tm-ós*.

§ 393. The ordinals of the hundreds were formed in prim. Greek from the corresponding cardinals with -οστός from the ordinals of the tens, as *ἑκατ-οστός, διᾱκοσι-οστός, τριακοσι-οστός, &c.*; and similarly in Latin, *cent-ēsīmus, ducent-ēsīmus, trecent-ēsīmus, &c.* In like manner were also formed the ordinals of the thousands, as *χιλι-οστός, δισχιλι-οστός, &c.*, cp. also Lat. *mill-ēsīmus*.

3. OTHER NUMERALS.

§ 394. The multiplicative numeral adverbs were formed differently in the different languages. Greek, Latin and Sanskrit have similar words for *twice* and *thrice*, as *δῖς, τρίς*, Lat. *bis, ter* from **tris*, Skr. *dvīḥ, tríḥ*, but for the other numerals they had different formations, as *ἄ-παξ*: *πήγνυμι*, Lat. *sem-el*, Skr. *sa-kṣt* (§ 380); *τετράκις*, Lat. *quater*, Skr. *catūḥ*; *πεντάκις*, Lat. *quīnquies*, Skr. *pañcaktvaḥ, &c.* From *four times* onwards the Greek numerals were formed from the cardinals by means of the suffix -κις in Attic beside -κι in various other dialects. -κις had its -s from *δῖς* and *τρίς*, and -κι- corresponds to the

Sanskrit adverbial particle *cid* which was originally the neuter of the interrogative pronoun, Indg. **qid*, Lat. *quid* (§ 202, note 1), cp. Hom. *πολλά-κι* for older **πολλύ-κι* = Skr. *pūru cid*, *many times* (cp. § 202, note 2). From forms like *τετρά-κis*, *έπτά-κis*, *ένά-κis*, *δεκά-κis*, *τριᾱκοντά-κis* the *-άκis* became extended by analogy to all the other numerals, as *πεντάκis*, *έξάκis*, *όκτάκis*, *είκοσάκis*; *έκατον-τάκis* with *-τάκis* after the analogy of *τριᾱκοντάκis*, *τεσσαρακοντάκis*, &c.; *διακοσι-άκis*, *χιλι-άκis*.

§ 395. The multiplicative adjectives were formed by adding *-πλός*, *-πλοῦς*: *πλέω* to the forms of the cardinal numerals as they appear in the multiplicative adverbs, as *ά-πλοῦς*, *δι-πλοῦς*, *τρι-πλοῦς*, *τετρα-πλοῦς*, *πεντα-πλοῦς*, &c. And similarly *ά-πλός*, *δι-πλός*, the *-πλός* of which corresponds to the *-plus* in Lat. *sim-plus*, *du-plus*. With *-πλός* is also related the *-πλάσιος* from **πλατιγός* in *δι-πλάσιος*, *τρι-πλάσιος*, *τετρα-πλάσιος*, &c.

δισσός, *τρισσός*, Att. *διττός*, *τριττός* from **διχγός*, **τριχγός* were formed from the stems *διχ-*, *τριχ-* in the adverbs *δίχα*, *τρίχα*; and similarly Ion. *διξός*, *τριξός*, *τετραξός*, *πενταξός*, from **διχθγός*, &c. were formed from the adverbs *διχθά*, *τριχθά*, &c. The formation of these adverbs in *-χα*, *-χθα* has never been satisfactorily explained.

§ 396. The feminine nouns of number in *-άς* gen. *-άδος* with *-ά-* from *-ῃ-*, *-ῆ-*, which was original in *έπτάς*, *έννεάς* (*είνάς*) and *δεκάς*. After the analogy of these were then formed, *μονάς*, *ένάς*, *δύάς*, *τριάς*, *τετράς*, *πεντάς* (*πεμπάς*), *έξάς*, *έβδομάς*, *όκτάς*, *όγδοάς*. It is difficult to account for the *-δ-* suffix in the above forms unless we may suppose that *-d-* stood beside *-t-* in prim. Indg., cp. the stem *δεκάδ-* beside Skr. *daśát-*, Lith. *deszimt-*, O.Slav. *desęt-* (§ 111). It is probable however that the suffix was originally *-t-*, as it certainly was in *είκάς*, &c. and that the new formation in the inflected forms went out from the nom. singular where *t-* and *d-* stems regularly fell together (§ 343). In *ίκάς*,

εἰκάς, τριᾱκάς with -ᾱ- after the analogy of τριᾱκοντα, -κάς represents Indg. *kmt-s and the Sanskrit stem -śát-. ἑκατον-τάς with the second -τ- from the ordinal ἑκατοστός.

For feminine numerals like τριτῦς, τετρακῦς, &c. see § 266.

CHAPTER XI

PRONOUNS

§ 397. The most difficult chapter in works on comparative grammar is the one dealing with the pronouns. It is impossible to state with any degree of certainty how many pronouns the parent Indg. language had and what forms they had assumed at the time it became differentiated into the various branches which constitute the Indg. family of languages. The difficulty is rendered still more complicated by the fact that most of the pronouns, especially the personal and demonstrative, must have had accented and unaccented forms existing side by side in the parent language itself; and that one or other of the forms became generalized already in the prehistoric period of the individual branches of the parent language. And then at a later period, but still in prehistoric times, there arose new accented and unaccented forms side by side in the individual branches, as e. g. beside the accented form *mē, *me* there existed in prim. Indg. the unaccented form *me, the former of which became generalized in Latin. In Sanskrit the original accented form mā=Indg. *mē came to be used for the unaccented form and then a new accented form mām was created with -m from ahām, *I*. In Greek the accented form died out and then to the old unaccented form μὲ a new accented form ἐμέ was created with ἐ- from ἐγώ; and similarly Skr. tvā = Indg. *twē, *thee* beside tvām; Gr. σὲ from Indg. *twe beside the new accented

form *σέ*. And in like manner Indg. **tū*, *thou* beside **tu*, both forms of which were preserved in Greek and Old English, as Hom. *τῦ-νη*, OE. *pū*, *thou* beside Dor. *τύ*, Att. *σύ*, OE. *pu*, but the former became generalized in Latin and the latter in most of the Greek dialects. The original accented accusatives *nōs*, *vōs* became generalized in Latin whereas Sanskrit preserved the old distinctions between the accented (*asmān*, *yuśmān*) and the unaccented (*naḥ*, *vaḥ*) forms. The following examples will illustrate the manner in which such double forms come into existence: The prim. Germanic accented form for *I* was **ek* beside the unaccented form **ik*. The separate Germanic languages generalized one or other of these forms before the beginning of the oldest literary monuments and then new accented beside unaccented forms came into existence again. And similarly during the historic periods of the different languages. Thus, e.g. the OE. for *I* is *ic*, this became in ME. *ich* accented form beside *i* unaccented form, *ich* then disappeared in standard ME. (but it is still preserved in one of the modern dialects of Somersetshire) and *i* came to be used as the accented and unaccented form. At a later period it became *ī* when accented and remained *i* when unaccented. The former has become NE. *I*, and the latter has disappeared from the literary language, but it is still preserved in many northern Engl. dialects, as *i*. In these dialects *i* is regularly used in interrogative and subordinate sentences; the ME. accented form *ī* has become *ai* and is only used in the dialects to express special emphasis, and from it a new unaccented form *a* has been developed which can only be used in making direct assertions. Thus in one and the same dialect (Windhill, Yorks.) we arrive at three forms: *ai*, *a*, *i*, which are never mixed up syntactically by genuine native dialect speakers. This old distinction between the accented and unaccented forms of the personal pronouns has given

rise in many of the South Midland dialects to an entirely new classification whereby the old subjective form has come to be used for the subject and object when accented, and the old objective form for the subject and object when unaccented, as *she saw she, her saw her, she saw her, her saw she*, which have quite different meanings according as *she* and *her* are accented or unaccented. Something similar to what has happened, and still is happening in the modern dialects, must also have taken place in the prehistoric and historic periods of all the Indg. languages; hence in the prehistoric forms of the pronouns given in the following paragraphs, it must not be assumed that they were the only ones existing in prim. Indo-Germanic or prim. Greek. They are merely given as the nearest ascertainable forms from which the historic Greek forms were descended.

§ 398. The pronouns are usually divided into personal, reflexive, possessive, demonstrative, interrogative, and indefinite pronouns. There is among the various languages considerable agreement in the formation of the personal pronouns of the first and second persons, and of the simple reflexive, simple demonstrative and interrogative pronouns. But all the other classes or parts of classes of pronouns were formed more or less differently in each branch of the parent Indg. language, so that the words used to express such pronouns do not stand in any etymological relation to each other. Owing to this great multiplicity of forms in the oldest historic period of the individual languages, it is impossible in most classes of the pronouns to reconstruct the prim. Indg. paradigms with any degree of certainty or accuracy.

§ 399. In the parent Indg. language the formation of most of the cases of pronouns which had special forms for the masculine, feminine and neuter differed considerably from that of the nouns, cp. *ó*, Skr. *sá*, Goth. *sa* beside *lúkos*, Skr. *vṛkaḥ*, Goth. *wulfs*, *wolf*; *τό*, Skr. *tát*, Lat.

is-tud beside *ζυγόν*, Skr. *yugám*, Lat. *jugum*, *yoke*; nom. pl. *οί*, *τοί*, Skr. *té*, Goth. *pái* beside Skr. *vṛkāḥ*, Goth. *wulfōs*. This original distinction was not so well preserved in Greek as in most of the other Indg. languages. In Greek there were few differences between the case-endings of nouns and pronouns because of various analogical formations whereby the pronouns came to have noun-endings and vice versa, cp. *τῶν* (§ 408): *λύκων* beside Skr. *téṣām*: *vṛkāṇām*, but *λύκοι* (§ 325): *οί*, *τοί* beside Skr. *vṛkāḥ*: *té*, Hom. *θεῶν* (§ 321): *τᾶν* beside Skr. *áśvānām*, *of mares*: *tásām*.

§ 400. In the personal pronouns we have not only to take into consideration the distinction between original accented and unaccented forms, but also between the different stems and different words which go to form the paradigms of the first and second persons. Many forms had no real case-endings at all, and the so-called cases were formed from entirely different words which were not etymologically related, as in English *I*, *me*; *we*, *us*; *thou*, *you*, corresponding in meaning to Skr. *ahám*, *mām*; *vayám*, *asmán*; *tvám*, nom. *yūyám*, acc. *yuṣmán*, but in Greek and Latin the original distinction between *we* and *us* became obliterated, as *ἡμεῖς*, acc. *ἡμᾶς* from the same stem as the nominative, Lat. nom. and acc. *nōs*. The reason why the plural of *I* was formed from an entirely different word is obvious, because it not only includes the speaker but also the person or persons spoken to or of. But why the plural of *thou* should be an entirely different word in all the Indg. languages is not known. The plural endings of these pronouns in Greek and the other languages are not original. So far as the forms for the plural were inflected at all, they were originally inflected as singulars. Such personal pronouns as have real case-endings have them mostly after the analogy of the nouns. This is especially so in Greek. The pronouns of the third person

were originally demonstrative in origin. In the parent language as in Greek, Latin, Sanskrit, &c. the nominative of the personal pronouns was rarely used except to express emphasis, because it was sufficiently indicated by the personal endings of the verb.

§ 401. In many of the Indg. languages certain particles occur, which are attached enclitically to the personal pronouns, and in some forms have become an integral part of the pronoun, as in *ἐγώ-ν*, *ἐγώ-νῃ*, *ἐγω-γε*, *ἐμέγε* (= Goth. *mik*, OE. *mec*, OHG. *mih*, where the particle became an integral part of the word), Skr. *ahá-m*, *I*, *vay-ám* : OE. *wē*, Goth. *weis*, Indg. **wei*, *we*; Lat. *ego-met*; and similarly in demonstrative pronouns, as *ὅδε*, *ούτοσί*; Lat. *id-em*, Skr. *id-ám*, beside Lat. *id*; Lat. *hic* for older *hi-ce*; Skr. nom. fem. *a-sá-u*, *that*; and even medially in *ὄτος* from **so + u + to-s* (§ 411). Many of these particles are of obscure origin and it is therefore impossible to determine in all cases what was their original force or meaning.

I. PERSONAL.

First Person.

§ 402. Singular: It is impossible to determine with certainty what was the original form or forms of the nominative. It probably was **egō* = *ἐγώ*, *ἐγω-γε*, *ἐγώ-ν* (mostly before vowels, entirely so in Homer), *ἐγώ-νῃ*, Boeot. *ἰών*, *ἰών* from *ἐγώ-ν* through the intermediate stages **ἑῶν*, **ἰῶν*, beside *ἰών-ει*, O.Lat. *egō*, beside the unaccented form **ego* = Lat. *ego*, Goth. *ik*, Skr. *ahá-m* from **egho-m* with the same interchange between *g* and *gh* as in *μέγας* beside Skr. *mahán*, *great*. This interchange between media and media aspirata existed in the parent Indg. language under certain unknown conditions (§ 111).

The original form of the accusative was **mē* beside **me*,

the former occurs in Skr. *mā*, *mā-m*, Lat. *mē*, and the latter in *ἐμέ*, *ἐμέ-γε*, *μὲ*, Goth. *mik* = *ἐμέ-γε*.

The stem-form **me* was probably used for the genitive in the parent language. From **me* was formed in each branch of the various languages a new genitive in different ways, cp. *ἐμοῦ*, Skr. *māma*, Lat. *mei*, *mis*, Goth. *meina*. In Greek it was mostly formed from *ἐμέ*, *μὲ* by means of *-σjo*, *-so* from the simple demonstrative pronoun (§ 408), as Hom. *ἐμεῖο* from **ἐμεσjo*, Att. *ἐμοῦ*, *μοῦ*, Ion. *ἐμέο*, *ἐμεῦ*, *μεῦ*, from **ἐμεσο*, **μεσο*; Dor. Lesb. *ἐμοῦς*, Dor. *ἐμέος*, *ἐμεῦς*, from *ἐμε* + *os* from the genitive of the consonantal stems (§ 302); Hom. Lesb. and Dor. *ἐμέ-θεν* with the same ablative adverbial particle which occurs in *πόθεν* (§ 568).

The dative *ἐμοί*, *μοί*, Skr. *mē*, Lat. *mi* represents the original unaccented form **moi* which was also used for the genitive. The original accented form seems to occur in Skr. *māhya-m*, Lat. *mihī*. Dor. *ἐμίν* was formed after the analogy of the dative = locative plural *ἅμιν*; Hom. *ἐμέ-θεν* is the same as in the genitive.

Dual: The nom. and acc. *νώ* belongs, like the Skr. unaccented form *nāu*, to the plural stem *nō-* which occurs in Skr. *naḥ*, Lat. *nōs*, *we*; Hom. *νωῖ* from **νωφι* with the numeral *ἑῷ*, *both*, *two* (§ 386).

The gen. and dat. *νωῖν*, Hom. *νωῖν* from *νωφιν* with *-ν* from the dat. plural.

Plural: The original form of the nominative was **wei*, which occurs in Skr. *vay-ām*, Goth. *wei-s*, *we*. The Greek nominative was formed from the stem of the accusative = Indg. **ns-me*, and with *-s* after the analogy of the consonantal stems (§ 311). **ns-me-s* regularly became **ᾱσμες* in prim. Greek, and corresponds to Hom. Lesb. *ᾱμμες* (§ 214), Dor. Boeot. *ᾱμές*; Att. Ion. Hom. *ῥμεις* with *-εις* after the analogy of the masc. *s*-stems (§ 366). All the forms of the nom. acc. gen. and dat. plural with the spiritus asper had it from *ῥμεις*, &c.

The original form of the accusative was **ns-me*, probably from older **ns-sme*, where *ns-* (= Goth. *uns*, *us*, *as*, Skr. *as-*) is the weak grade of *nō-*, which occurs in Skr. *naḥ*, Lat. *nōs*, *we*, and *-sme* corresponds to the Sanskrit enclitic particle *sma*, *ever*; *indeed*, *certainly*, cp. the Skr. acc. *asmān*, *us*. **ns-me* regularly became **ḁσμε* in prim. Greek = Hom. Lesb. *ἄμμε*, Dor. *ἄμέ*, but Ion. *ἡμέας* with *-as* from the accusative of the consonantal stems (§ 312), and similarly Att. *ἡμᾶς* from older *-εας*, the regular contraction of which would have been *-ῆς*.

The genitive plural was originally inflected like a singular. In Greek it was formed from the stem of the accusative plural and a pluralized form of the ending of the gen. singular, as Hom. *ἡμείων*, Hom. and Ion. *ἡμέων*, Att. *ἡμῶν*, Dor. *ἄμέων*, *ἄμῶν*, Lesb. *ἄμμέων*.

The original locative ending was probably *-smin* which occurs in the Sanskrit loc. sing. *tásmin* : nom. *sá*, *this* (§ 408). The Greek dative = locative was formed from the prim. Greek stem-form **ḁσμ(ε)-* with the addition of the ending *-iv*, as Aeolic *ἄμμιν* beside *ἄμμι* with *-ι* from the ending of the dat. plural of consonantal stems (§ 316), Dor. *ἄμιν*, Att. Ion. *ἡμῖν* beside Att. *ἡμῖν* with long *-î* after the analogy of the long vowel in the other plural case-endings; Lesb. *ἄμμεσιν* was formed from the nom. plural + the ending *-iv*.

Second Person.

§ 403. Singular : The original nominative was **tū* beside **tu*, the former occurs in Hom. Dor. *τῦ-νη*, Lac. *τοῦ-νη* (*ou* = *ū*), Boeot. *τοῦ-ν* (*ou* = *ū*), Lat. *tū*, OE. *pū*, and the latter in Dor. Lesb. *τύ*, Att. Ion. Lesb. *σύ* with *σ-* from the accusative, OE. *pu*.

The original accusative was **tē*, **twē* beside **te*, **twe*. The **tē* corresponds to Lat. *tē*, and **twē* to Skr. *tvā*, *tvā-m*. **te* corresponds to Dor. *τέ*, unless the *τ-* was from

the nominative, OE. *þe-c*, OHG. *di-h*, and **twe* to Att. Ion. &c. *σέ* from **τφε* (§ 168). Dor. Boeot. *τίν* was the locative in form, cp. *ἐμίν* (§ 402). In Dor. the nom. *τύ* was also used for the accusative.

The original form of the genitive was **tewe*, which occurs in Skr. *táva*, of *thee*. In Greek, Lat. and the Germanic languages it was formed in the same manner as the genitive of the first person, as Hom. *σεῖο* from **τφεσγο*; Att. *σοῦ*, Ion. *σέο*, *σεῦ*, from **τφεσο*; Dor. *τέο*, *τεῦ*, from **τεσο*; Dor. Boeot. *τέος*, *τεῶς* from *τε + os* from the genitive of the consonantal stems (§ 302); Dor. Boeot. *τεοῦς* from *τεο + os* with double genitive ending; Dor. *τεοῦ* with *-εοῦ* from *τεοῦς*; Lesb. *σέθεν* as in *ἐμέθεν*. Lat. *tuī*, *tīs*, Goth. *þeina*.

The original form of the locative was **twei* beside **toi* which was also used for the genitive, the former occurs in the Greek dative *σοί* from **τφοι*, and in the Sanskrit accented form *tvé*, and the latter in Hom. Dor. *τοί* and in the Sanskrit unaccented form *tē*. Dor. *τίν* and Hom. Dor. *τεῖν* were locatives formed like *ἐμίν*.

Dual: The nominative and accusative was in prim. Greek **σφω* from older **τφω*, which was changed to *σφώ* either through the influence of the ending in *ἄμ-φω* or of the *σφ-* in the reflexive pronominal form *σφί(ν)*; Hom. *σφῶϊ* was formed like *νῶϊ*.

The genitive and dative *σφῶν*, Hom. *σφῶϊν*, was formed like *νῶν*, *νῶϊν*.

Plural: The original nominative was **jūs* which occurs in Goth. *jūs*, Lith. *jūs*; Skr. **yūṣ-ám* was changed to *yūyám* after the analogy of *vayám*, *we*. The Greek nominative was formed from the stem-form of the accusative as in the first person, as Att. Ion. *ὑμεῖς*, Ion. *ὑμεῖς*, Hom. Lesb. *ὑμμες*, Dor. Boeot. *ὑμέες*.

The original form of the accusative was **us-me* probably from older **us-sme*, where *us-* is the weak grade of **wōs* which occurs in Skr. *vaḥ*, Lat. *vōs*. From prim. Greek

**ὅσ-με* were formed with the same endings as in the first person, Hom. Lesb. *ὅμμε* (§§ 214, 402), Dor. *ὅμέ*, Ion. *ὅμέας*, *ὅμέας*, Att. *ὅμᾶς*.

The genitive was formed in the same manner as in the first person, as Hom. *ὅμέων*, Ion. Dor. *ὅμέων*, Ion. *ὅμέων*, Att. Dor. *ὅμῶν*, Lesb. *ὅμμέων*.

The Greek dative = locative was formed from the prim. Greek stem-form **ὅσμ(ε)*- with the same endings as in the first person, as Aeolic *ὅμμιν* beside *ὅμμι*, Dor. *ὅμῖν*, Att. Ion. *ὅμῖν*, Ion. also *ὅμῖν*.

2. REFLEXIVE.

§ 404. The reflexive pronoun originally referred to the chief person of the sentence (generally the subject), irrespectively as to whether the subject was the first, second, or third person singular or plural. This usage was in a great measure preserved in Sanskrit and the Baltic-Slavonic languages, but in Greek, Latin and the Germanic languages the original reflexive pronoun became restricted to the third person, and then the reflexive pronouns for the first and second persons came to be expressed differently in the different languages. The original stem-forms of the reflexive pronoun were **se-* and **sewe-* beside **swe-*. **se-*, the strong grade form, occurs in Lat. *sē*, *si-bi* and in Goth. *si-k*, *himself*, and *s-*, the weak grade form, in *σ-φί(ν)* where *-φ(ν)* is the same suffix which often appears in nouns (§ 306). After the analogy of the datives *σφίν* : *φίν* there was formed *σφέ* beside *φέ*. At first the forms *σφίν*, *σφέ* were used beside *φίν*, *φέ* without any distinction in meaning, but at a later period the *σφ*-forms gradually came to be used more and more for the plural only, and then special plural forms for the other cases were made chiefly after the analogy of the personal pronouns of the first and second persons. For examples of **sewe-* beside **swe-* see below.

Singular : The original form of the accusative was *se beside *sewe, *swe, the former occurs in Lat. *sē*, Goth. *si-k*, *himself*, and the latter in Hom. *ἑέ* from *σεφε, Att. Hom. Dor. *ῥέ*, Lesb. *φέ*, from *σφε.

The original form of the genitive was *swe which was also used for the accusative. In Greek the two cases became differentiated by the creation of a new form for the genitive just as in the personal pronoun of the first person, as Hom. *εἶο* from *σφεσjo; Att. Dor. *οὖ*, Hom. *ῥο*, Ion. *εῖ*, from *σφεσο; Dor. Boeot. *έοῦς*, Dor. *οῦς*, Loc. *φέος*, from *σφε+ος from the genitive of the consonantal stems (§ 302); Dor. *έοῦ* after the analogy of *έοῦς*; Lesb. *φέθεν*, Hom. Dor. *ῥθεν* with -θεν as in *έμέθεν* (§ 402).

The Att. Ion. Dor. dative *οἷ* can be from prim. Greek *σφοι or from *σοι, *eius*, *ei*, Lesb. *φοῖ*, Cypr. *φοι* from *σφοι; Hom. *έοι* from *σεφοι; Dor. *φίν*, Boeot. *έῖν* from *σφιν were old locative forms like *έμίν* (§ 402).

Dual : From *σφέ* and *σφίν* were formed the Hom. nom. and acc. *σφωέ*, and gen. and dat. *σφώιν*.

Plural : The nom. *σφέις*, acc. Ion. *σφέας*, Att. also Hom. *σφᾶς*, gen. Hom. Dor. Lesb. *σφείων*, Ion. *σφέων*, Att. also Hom. *σφῶν*, were all formed after the analogy of the personal pronouns of the first and second persons. On the Dor. Lesb. acc. *σφέ*, and Ion. Dor.-Lesb. dat. *σφί(ν)*, see above; the Att. Ion. dat. *σφίσι(ν)* was formed after the analogy of the dative of the consonantal stems (§ 316).

§ 405. The singular of the compound reflexive pronouns was formed from the personal pronouns + *αὐτός*, which in Homer is always written as two separate words, as *έμοι αὐτῷ*, *σοι αὐτῷ*, *οἷ αὐτῷ*, &c., but in the other dialects as one word, as acc. Att. *έμαυτόν*, *σεαυτόν*, *σᾶυτόν*, *ἑαυτόν*, *αὐτόν*, Ion. *έμεωυτόν*, &c.; gen. Att. *έμαυτοῦ*, *σεαυτοῦ*, *σᾶυτοῦ*, *ἑαυτοῦ*, *αὐτοῦ*, Ion. *έμεωυτοῦ*, &c.; dat. Att. *έμαυτῷ*, *σεαυτῷ*, *σᾶυτῷ*, *ἑαυτῷ*, *αὐτῷ*, Ion. *έμεωυτῷ*, &c. Regular forms were Att. *ἑαυτῷ*, Ion. *έωυτῷ*, from *έοι* (dat. of the

possessive pronoun) + *αὐτῶ*, Att. *αὐτῶ* from *οἶ* + *αὐτῶ*, then after the analogy of these the *ā* and *ω* were extended to the other cases.

In the plural the two pronouns were inflected separately in the first and second persons and often also in the third, as *ἡμᾶς αὐτούς*, *ὑμᾶς αὐτούς*, *σφᾶς αὐτούς* beside simply *αὐτούς*.

The origin of *αὐτός* is uncertain. Some scholars assume that it is from **ἄσν* + the pronominal stem *το-*, where **ἄσν* corresponds to Skr. *asu-*, *life, life of the soul*. Others assume that it is composed of the adverb *αὖ*, *again* + *το-s*. The oblique cases of *αὐτός* were used to express the personal pronoun of the third person. The reflexive forms *σφείς*, *σφᾶς*, *σφῶν*, *σφίσι* were also used to express the plural of the third person.

3. POSSESSIVE.

§ 406. The possessive pronouns were inflected like ordinary adjectives: *ἐμός*; Att. *σός*, Skr. *tváh*, Indg. **twos*, *thy*, beside Hom. Dor. Lesb. *τέος*, Boeot. *τιός*, O.Lat. *tuos*, later *tuos*, *tuus*, Indg. **tewos*; Att. Hom. *ός*, Cret. *φος*, Skr. *sváh*, Indg. **swos*, *his*, beside Hom. *έός*, Boeot. *έφος*, O.Lat. *sovos*, later *suos*, *suus*, Indg. **sewos*; Hom. *σφός* was formed after the analogy of *ός*, *έός*. Att. Ion. *ἡμέ-τερος*, Dor. *ἄμέ-τερος*, Lesb. *ἄμμέ-τερος*, Att. Ion. Dor. *ὑμέ-τερος*, *σφέ-τερος*, Hom. *νοί-τερος*, *σφωί-τερος*, like Lat. *nos-ter*, *ves-ter*, were formed with the comparative suffix *-tero-* (§ 376); Lesb. *ἄμμος*, *ὑμμος*, Dor. *ἄμός*, *ὑμός* were formed direct from the accusative stems of the personal pronouns.

4. DEMONSTRATIVE.

§ 407. In the parent Indg. language the nominative singular masculine and feminine was **so*, **sā* = *ó*, Dor. *ᾶ*, Att. Ion. *ή*, Skr. *sá*, *sā*, Goth. *sa*, *sō*, *this*, *that*, *the*. All

the other cases of the singular, dual and plural were formed from the stems *to-*, *te-*, fem. *tā-*. On the Greek case-endings of the inflected forms see § 399.

a. Masculine and Neuter.

§ 408. Singular: The nominative masculine *ὁ* corresponds to Skr. *sá*, Goth. *sa*, Indg. **so*. The accusative masculine *τὸν* = Skr. *tám*, Lat. *is-tum*, Goth. *þan-a*, Indg. **tom*. The nom. and acc. neuter *τό* = Skr. *tát*, Lat. *is-tud*, Goth. *þat-a*, OE. *þæt*, Indg. **tod*. The original form of the genitive was **tosjo* beside **toso*, **teso*, the former occurs in Hom. *τοῖο* from **τοσjo*, Skr. *tásya*, and **toso* in Att. Ion. *τοῦ*, Dor. *τῶ*, and **teso* in Goth. *þis*, OHG. *des*. The original form of the dative was **tōi* beside **tosmōi*, the former occurs in *τῷ*, Lat. *is-tō*, and the latter in Skr. *tásmāi*.

Dual: The original case-endings of the nominative and accusative dual were the same as those of the *o*-declension of nouns (§ 325). Masc. **tōu* = Skr. *táu*, beside **tō* = *τῶ*, Skr. *tá*; neut. **toi* = Skr. *té*, Gr. *τῶ* for **τοῖ* was a new formation like *ζυγῶ* (§ 326). On the gen. and dat. *τοῖν*, *τοῖν* see § 325.

Plural: The original masculine nominative was **toi* = Dor. &c. *τοί*, Skr. *té*, Lat. *is-tī*, Goth. *þái*; Att. Ion. Cret. Lesb. Thess. Arcad. and Cyprian *οί* was a new formation after the analogy of *ὁ*. The original masculine accusative was **tons* = Cret. *τόνς*, Att. Ion. &c. *τούς*, Skr. *tán*, Lat. *is-tōs*, Goth. *þans*. Nom. and acc. neut. Indg. **tā* = Vedic *tá*, Lat. *is-ta*, Goth. *þō*; Gr. *τά* was a new formation like *ζυγά* (§ 326). The Greek gen. *τῶν* was formed after the analogy of the *o*-declension of nouns (§ 399), the original genitive was **toisōm* which occurs in Skr. *téṣām*. The original form of the locative was **toisu* = Skr. *téṣu*; *τοῖσι* with *-σ-* restored as in *λύκοισι* (§ 325). The Greek dative

τοῖς corresponds to the original instrumental **tōis* = Skr. *tāih*, Lat. *is-tīs*, Lith. *taīs*.

b. Feminine.

§ 409. Singular : Nominative Indg. **sā* = Dor. *ā*, Att. Ion. *ῃ*, Skr. *sā*, Goth. *sō*. Accusative Indg. **tām* = *τήν*, Skr. *tām*, Lat. *is-tam*, Goth. *pō*. The Greek gen. and dat. *τῆς*, *τῇ* had the endings of the *ā*-declension of nouns (§ 321), the original forms were gen. **tosjās* or **tesjās* = Skr. *tāsyāḥ*, beside **tesās* = Goth. *pizōs*; dat. **tosjāi* or **tesjāi* = Skr. *tāsyāi*, beside **tesāi* = Goth. *pizāi*.

Dual : Nominative and accusative Indg. **tai* = Skr. *té*; Gr. *τᾶ* was a new formation like *χώρα* (§ 321); instead of *τᾶ* the masc. *τώ* was mostly used, and similarly gen. and dat. *τοῖν* for *ταῖν* (see § 325).

Plural : Nominative Indg. **tās* = Skr. *tāḥ*, Goth. *pōs*, Lith. *tōs*; Gr. *ταί*, *αἱ* were new formations after the analogy of *τοί*, *οἱ* (cp. § 321). Accusative Indg. **tāns* = Cret. *τάνας*, Att. &c. *τάς*, Lat. *is-tās*; Skr. *tāḥ*, Goth. *pōs* were the nom. used for the accusative. Genitive Indg. **tāsām* (cp. § 314) or **ōm* = Hom. *τᾶων*, Dor. *τᾶν*, Att. &c. *τῶν*, Lat. *is-tārum*. Locative Indg. **tāsu* = Skr. *tāsu*; on the Gr. dative forms *ταῖς*, *ταῖσι*, *τῇς*, *τῇσι* see § 321.

§ 410. The origin of the second element of *ῥ-δε*, *ῥ-δε*, *τό-δε* is unknown. Inflected forms of the second element occur in Hom. *τοῖσ-δεσσι*, *τοῖσ-δεσι* and in the Lesb. gen. pl. *τῶν-δεων*. Traces of similar compounds of the simple demonstrative with particles of unknown origin occur in the Thessalian neut. nom. sing. *τό-νε*, pl. *τά-νε* and with both elements inflected in the gen. sing. *τοῖ-νεος* and gen. pl. *τοῦν-νεουν*; in the Arcadian gen. sing. *τῶ-νί*, acc. fem. *τᾶν-νί*, neut. pl. *τα-νύ*; and in the Cyprian nom. *ῥ-νν*.

§ 411. The prim. Greek forms corresponding to *οὗτος*, *αὗτη*, *τοῦτο* were: **ῥ-υ-το*, **ᾱ-υ-το*, **τοδ-υ-το*; acc. **τον-υ-το*, **τᾶν-υ-το*, **τοδ-υ-το*; gen. **τοσο-υ-το*, **τᾶσ-υ-το*, **τοσο-υ-το*, &c.,

consisting of the simple demonstrative + the deictic particle *u*, which is also common in Sanskrit pronouns (cp. nom. fem. *asáu* = *a* + *sá* (= Gr. *ἄ*-) + *u*, *that*, acc. masc. *amúm* = *am* + *u* + *m*, *that*), together with the uninflected pronominal stem *το*-. During the prehistoric period of the language the inflexion was then transplanted from the first to the last element of the compound, as acc. *τοῦτον*, *ταύτην*, *τοῦτο*, from **το-υ-τον*, **τᾱ-υ-τᾱν*, **το-υ-τοδ*; gen. *τούτου*, *ταύτης*, from **το-υ-τοο*, **τᾱ-υ-τᾱς*, &c.; and the old nominatives **οὔτο*, **αὔτο* became *οὔτος*, *αὔτη* after the analogy of the nom. singular of adjectives. The Att. Ion. nom. pl. *οὔτοι*, *αὔται* beside Dor. *τοῦτοι*, *ταῦται* were new formations after the analogy of the nom. singular. The nom. acc. pl. neut. *ταῦτα* had *-αν* from the feminine stem. The masc. forms of the dual were used for all genders; and similarly in Att. Ion. the gen. pl. *τούτων* beside Dor. and Lesb. fem. *ταυτᾶν*.

In the Boeotian dialect the stem-form of the masc. nom. singular became generalized, as acc. *οὔτον*, neut. *οὔτο*, gen. *οὔτω*, nom. pl. *οὔτοι*, neut. *οὔτα*, acc. *οὔτως*, gen. *οὔτων*.

The deictic particles *-ι*, *-ιν*, originally the feminine nominative and accusative singular of a demonstrative pronoun, were often attached to the above compound demonstratives to express emphasis, as *ὁδί*, *ἡδί*, *τοδί*, *οὔτοσί* or *-ιν*, *αὔτηί*, *τουτουί*, *τουτωνί*. This *-ι* is the same as in the Sanskrit fem. nom. sing. *iyám* from **i-am*, *this*, and in the Gothic fem. acc. *ija*, *her*, and is related to Hom. *ἴα*, *ἴαν*, *ἴης*, *ἴῃ* (cp. § 380).

§ 412. Att. *ἐκείνος*, also poet. *κεῖνος*, Ion. *ἐκείνος*, *κεῖνος*, Dor. Lesb. *κῆνος*. *ἐκείνος* is composed of *ἐ* = the isolated pronominal particle which occurs in Skr. *asáu*, *that*, and *κεῖνος* from **κε-ένος* where *κε*- corresponds to the Latin particle *ce* in *ce-do*, *huius-ce*, and *ένο*- is an old pronominal stem (§ 410); and similarly Dor. *τῆνος* from **τε-ένος*. On forms like *ἐκεινοσί*, *ἐκεινωνί* see above.

5. RELATIVE.

§ 413. The Indg. stem-forms of the relative pronoun were masculine and neuter *jo-*, feminine *jā-* = *ō-*, *ḡ-*, Skr. *ya-*, *yā-*, as sing. nom. *ōs* (Phrygian *ios*), *ḡ*, *ō*, Skr. *yāḥ*, *yā*, *yāt*, Indg. **jos*, **jā*, **jod*; gen. *ōv* from **joso*, *ḡs* (a new formation like *τῆς*, § 409), Skr. *yāsya*, *yāsyāḥ*; the Hom. gen *δου* (*B* 325, *α* 70) and *ἑης* (*II* 208) are incorrect forms; pl. nom. *ol*, *al* (a new formation like *αἱ*, § 409), *ā*, Skr. *yē*, *yāḥ*, Vedic *yā*, Indg. **joi*, **jās*, **jā*. The simple demonstrative, especially the *τ*-forms, was often also used for the relative in Homer, Herodotus, Dor. Lesb. Boeot. and Arcadian.

6. INTERROGATIVE AND INDEFINITE.

§ 414. The parent Indg. language had several stems from which the interrogative pronoun was formed, viz. *qo-*, *qe-*, fem. *qā-*; *qi-*, *qu-*, with labialized *q* (§ 202). It is impossible to determine to which cases the various stems originally belonged owing to the levelling which took place in the prehistoric period of the separate languages.

qo- occurs in Skr. *kāḥ*, Goth. *hvas*, Lith. *kàs*, *who?*, neut. Lat. *quod*, Goth. *hva*, OE. *hwæt*, *what?*, Indg. **qos*, **qod*. In Greek it only occurs in pronominal adjectives and adverbs, as *πότερος*, Skr. *katarāḥ*, Goth. *hvaþar*, *which of two?*, *ποῖος*, *πόσος*; *ποῖ*, *πόθεν*, *πότε*, *πώποτε*, *πῶς*, Cret. *δ-πω*.

qe- occurs in the gen. sing. Goth. *hvis*, O.Slav. *česo*, Hom. *τέο* (Att. *τοῦ*, Ion. *τεῦ*), from Indg. **qeso*, *whose?* From *τέο* was formed *τέων* and then further *τέφ* (Att. *τῷ*), *τέοισι*; and similarly to *ἔτεο* (Att. *ἐτου*, Ion. *ἐτεν*) were formed *ἐτεων* (Att. *ἐτων*), *ἐτεφ* (Att. *ἐτῷ*), *ἐτέοισι* (Att. *ἐτοῖς*). It also occurs in Dor. *πεῖ* for **τεῖ* and in the conjunction *τε*, Skr. *ca*, Lat. *que*, *and*.

qā- occurs in the fem. nom. Skr. *kā*, Goth. *hvō*, *who?*,

acc. Skr. *kām*, Goth. *hwō*, *whom?*, and in Dor. *πῶ*, Att. *πῇ*.

The stem *qu-* is only found in adverbs, as Dor. *δ-πῦς* (Rhodes), *δ-πυι* (Gortyn), *πῦς* (Syracuse), *whither*; Skr. *kū*, Lith. *kuř*, *where*; Lat. *ali-cu-bi*, *ne-cu-bi*, &c.

It is probable that *qi-* belonged originally only to the masc. and neut. nom. and acc. singular, cp. *τίς*, *τί*, Lat. *quis*, *quid*, Indg. **qis*, **qid*; masc. acc. **τίν*, Lat. *quem* for older **quim*. In Greek the stem *τι-* became generalized for all cases and genders. From **τίν* was formed a new accusative *τίνα* after the analogy of such words as *ένα*, cp. also § 330. The *-ν* in *τίνα* was then levelled out into the other cases, as *τίνος*, *τίνι*; *τίνε*, *τίνοιν*; *τίνες*, *τίνας*, *τίνα*, *τίνων*, but *τίσι* : *τίνες* after the analogy of such forms as *φρεσί*, *κυσί* : *φρένες*, *κύνες*. From the stem *τι-* were also formed Lesb. *τίφ*, *τίοισιν*; Cret. *δ-τίμι* from **τισμι*, Indg. **qismi* beside the Skr. loc. *kásmīn*. Megarian neut. pl. *σά* from **τja* for *τίνα* (Arist. *Ach.* 757, 784); indef. Att. *ἄττα*, Ion. *ἄσσα* for initial **τά*, **σά* (§ 167), which arose from a mistaken division of the words in such combinations as *ὅποι' ἄττα*, *σμίκρ' ἄττα* for *ὅποιά ττα* (cp. Hom. *ὅποιά σσα*, τ 218), *σμίκρά ττα*; indef. rel. Att. *ἄττα*, Ion. *ἄσσα*, from **ᾱ-τja*. In like manner is also declined the simple indefinite pronoun which only differs from the interrogative in accent.

§ 415. *δεῖνα* is always accompanied by the def. article whether it remains uninflected for both numbers and all genders and cases or whether it is inflected. It is originally a compound of *δε*+the pronominal stem *-ενο-* which occurs in *ἐκεῖνος* from **ἐ-κε-ενο-ς* (§ 412), so that the original nominative masc. was **ὀδεῖνος*, acc. **τονδεῖνον*, &c. For the explanation of *δεῖνα* we have to start out from the neut. plural form *ταδεῖνα* = **τάδε-εῖνα* which, by a mistaken division of the compound, came to be regarded as being for *τα-δεῖνα*. At a later period *δεῖνα* in the combination

τὸν δέινα came to be regarded as the accusative of a consonantal stem (cp. *τίνα, τίνος*, § 414) to which were then formed *δεῖνος, δεῖνι, pl. δέινες, δείνας, δείνων*.

7. OTHER PRONOUNS.

§ 416. The parent Indg. language had several pronouns besides those dealt with in the preceding paragraphs. Some of these were not preserved in Greek and others were only preserved in scanty fragments, as

e-. The original forms were nom. *es, acc. *em, neut. *ed, gen. *esjo (Skr. *asyá*, of *this*) beside *eso (OHG. *es*, Goth. *is*, of *it*), fem. *esjās (Skr. *asyāḥ*), loc. *ei (preserved in *εἰ, εἰ-τα*, and the Goth. relative particle *ei*), instr. *ē (preserved in *ἤ, ἤ-τοι, ἐπει-ῇ*). The stem **e-** occurs in words like *ἐκεῖνος, ἐκεῖ, ἐκεῖθεν, ἐχθές*, &c., cp. Skr. *a-sāu*, *that*, Lat. *e-quidem*.

eno-, ono-, the former of which occurs in *ἐκεῖνος, κεῖνος*, Dor. *κῆνος*, from **κε-ένος*, Dor. *τῆνος* from **τε-ένος*, and *ἐνν*, and the latter in Lith. *anàs*, *that*, O.Slav. *onŭ*, *that, he*.

The locative of an old fem. stem **ā-** is preserved in the Dor. conj. *αἰ, if*.

i-, Lat. *is*, Goth. *is*, *he*; acc. Indg. **im*, Cypr. *ἰν*, O.Lat. *im*, Goth. *in-a*, *him*, Skr. *im-ām*, *this*. The stem also occurs in Hom. *ιδέ*, *and*, Skr. *i-dā*, *now, in this moment*, *i-há*, *here*. With *ἰν*, O.Lat. *im* are also probably related Hom. *μῖν* used for all genders but only in the singular, and post-Homeric poet. *νῖν* used for the singular and plural all genders. The exact formation of these two pronouns is obscure.

The feminine stem **ī-** which occurs in the Skr. nom. *iyām* from **i-ām*, *this*, and the particle **-ī** as in *οὔτοσ-ῖ, ἐκεινοσ-ῖ*, &c.; the acc. Indg. **ijām* (Goth. *ija*, *her*) beside **im*, **ijm* (cp. § 380) occurs in the particle *-ῖν*, as *οὔτοσ-ῖν*. With this pronoun is also related Hom. *ἰα, ἱαν, ἰῆς, ἰῆ*,

to which was formed a masc. *ἴος*, dat. *ἰῶ* in Hom. and Cretan.

The fem. pronoun **sī* = *ī*, O.Ir. OHG. *sī*, Goth. *si*, *she*.

ko-, ke-, the latter stem occurs in *ἐκεῖνος* from **ἐ-κε-ενος*, in Lat. *ce-do*, *huius-ce*, and in *ἐ-κεῖ*, *κεῖ-θεν*, *κεῖ-θι*, &c. where *κεῖ* is the old locative.

CHAPTER XII

VERBS

§ 417. The forms constituting the Greek verbal-system are of two kinds: the finite and the infinite forms. The finite forms consist of the indicative, subjunctive, optative, imperative and the so-called injunctive (§ 524). Their special characteristics are the personal endings, the augment, reduplication and the distinction of voice, tense and mood. The infinite forms are the infinitive, participles, and the verbal adjectives. The participles had become a part of the verbal-system in the parent Indg. language, and accordingly had voice- and tense-forms; whereas the infinitive, which is originally an isolated singular case-form of a nomen actionis, became for the most part associated with the verbal-system in the prehistoric period of the separate languages (§ 545). On the verbal adjectives see §§ 555-6.

Primitive Greek inherited almost the entire verbal-system of the parent Indg. language, to which it added considerably by the creation of numerous new formations, so that in course of time its verbal-system became more extensive than that of any other Indg. language. Such new formations were the passive aorist in *-θην*, the future passive in *-θησομαι*, the passive participle in *-θεις*, the so-called future perfect, the pluperfect, the future optative, the optative of the s-aorist, &c.

In the following paragraphs most of the remarks con-

cerning the finite forms of the verb properly belong to the province of syntax. And only such points are mentioned here as are necessary for understanding the finite forms. For the full treatment of the subject the student should consult Brugmann's *Griech. Grammatik*, third ed., pp. 458-568.

§ 418. **Number:** The Indg. finite forms of the verb had like nouns the three numbers—singular, dual and plural—which were preserved in the oldest period of Greek as also in the Aryan, Gothic and Baltic-Slavonic languages, but the dual had practically disappeared in the prehistoric period of the other languages. And even in prim. Greek the first person of the dual was supplanted by the plural. The second and third persons of the dual remained longer in Attic than in the other dialects, but even in this dialect they had become obsolete in the vernacular from about the beginning of the fourth century B.C.

§ 419. **Voices:** The parent Indg. language had two voices—the active and the middle. The former was preserved in the historic period of all the separate languages, and the latter was preserved in Greek, Aryan and Latin and partly also in Gothic. It had no special forms which were exclusively used to express the passive, but before the parent language had become differentiated into the separate languages the middle forms had to some extent begun to be used to express the passive. This mode of expressing the passive underwent further development in Greek, Sanskrit and Latin. And such middle forms as were preserved in Gothic became exclusively passive in meaning. The Greek second aorist passive in $-\eta\nu$ was originally active in form (§ 458), and the first aorist passive in $-\theta\eta\nu$ was a special Greek new formation (§ 514).

§ 420. The middle denoted that the action of the verb was directed towards the agent. The use in which the agent was the direct object was rare, as in $\lambdaούμαι$ ($\lambdaούμαι$),

I wash myself. The original difference in meaning between the middle and active was probably very slight, and this would account for the fact that many verbs with only middle forms have purely an active meaning without any idea of the reflexive meaning, cp. *ῥησται*, Skr. *āstē*, *he sits*; Skr. *sācatē*, *he follows*, Gr. *ἐπομαι*, Lat. *sequor*; *μητίομαι*, Lat. *mētiōr*; *κείται*, Skr. *śētē*, *he lies down*; and similarly *ἄγαμαι*, *ἄζομαι*, *ἄλλομαι*, *βούλομαι*, *ἐρεύγομαι*, *κρέμαμαι*, *μέμφομαι*, *οἴχομαι*, *πλάζομαι*, *σέβομαι*, *σκέπτομαι*, *τέρσομαι*, *φέβομαι*, &c. To such middle forms were often created active forms in the historic period of the language, as *ἄζω*, *σέβω* : *ἄζομαι*, *σέβομαι*. These new formations were based on the analogy of verbs which originally had active and middle forms side by side.

§ 421. Already in the parent Indg. language middle verbs sometimes had an active perfect, and some such verbs were also preserved in Greek, Sanskrit and Latin, as *-βέβουλα* : *βούλομαι*, *γέγονα* : *γίγνομαι*, *δέδορκα*, Skr. *dadārśa* : *δέρκομαι*, *μέμνηνα* : *μαίνομαι*, *ὄλωλα* : *ὄλλυμαι*; Skr. *papāda* : *pādyatē*, *he falls*, *vavārta* : *vārtatē*, *he turns*; Lat. *reverti* : *revertor*, *assensi* : *assentior*.

§ 422. Many verbs, which are otherwise active in form, have a future middle with active meaning. This is especially the case with such verbs as have a second aorist in use, as *τεύξομαι* : *ἔτυχον*, *πέισομαι* : *ἔπαθον*, *λήψομαι* : *ἔλαβον*, and similarly *ἁμαρτήσομαι*, *βήσομαι*, *γνώσομαι*, *δραμοῦμαι*, *θανοῦμαι*, *θίξομαι*, *καμοῦμαι*, *λήξομαι*, *φεύξομαι*, &c. This phenomenon is peculiar to Greek and is connected with the intransitive use of the second aorist. To aorists like *ἔστην*, *ἔφυν* were formed the future *στήσομαι*, *φύσομαι*, because *στήσω*, *φύσω* were transitive; *βήσω* became transitive after the analogy of *στήσω*, and then to *ἔβην* was formed the future *βήσομαι*. This mode of forming a middle future then became extended to other verbs.

§ 423. **Mode or manner of action:** It is important to note that tenses in the sense in which we generally use that word were of comparatively late development in the Indg. languages. The verbal forms—whether presential or preterite—had originally in themselves no inherent characteristic to indicate whether an action referred to the present, past or future. If we compare together the augmented tenses we see that they originally expressed something other than what we generally understand by the word tense. In the imperfect, aorist and pluperfect the verbal form itself merely denoted the mode or manner of the action according as it was durative or only momentary, as in English *seek* beside *find*, and it was merely the augment which denoted the past time, but the fact that the augment does not appear in the Latin, Old Germanic and Baltic-Slavonic languages shows that even the augment was not originally necessary to express past time. When the time of the action was sufficiently indicated by the context the augment was not used in the parent Indg. language, see § 430.

§ 424. In the following classification of the mode or manner in which the action takes place (*actio verbi*, or *Aktionsart* as it is generally called in German), it is as a rule only necessary to grasp clearly the difference between the momentary and the durative action. The mode or manner in which an action takes place can be conveniently divided into five types:—

(1) An action is said to be momentary, perfective or aoristic when it is practically completed at the moment it begins, as in English *find*, *strike*. Since this mode of action has no duration it was seldom used to express the present, therefore unaugmented momentary formations generally have a future meaning, as *εἶμι*, *νέομαι*. A verb became perfective by the addition of a preposition, cp. *ἀποθνήσκει* beside *θνήσκει*; Lat. *consequor* beside *sequor*;

this distinction in form and meaning was most fully developed in the Slavonic languages and became one of the most distinctive features of the verbal-system. The aorist is characteristic of this type.

(2) An action is said to be cursive, durative or imperfective when it denotes continuous action without any reference to its beginning or end, as in English **I am striking** as compared with **I strike**; ἐσθίω, πίνω beside ἔδομαι, πίομαι. The primary verbs in -jo- (§ 477) mostly had durative action, as in χαίρω, &c.

(3) The perfect action, that is the mode of action expressed by the perfect stem, denotes a state of the subject which has resulted from a previous action, as in οἶδα, τέθυνηκε as compared with γινώσκω, θνήσκει.

(4) An action is said to be iterative when it consists of repeated acts. Here belong especially the reduplicated presents, as βίβημι, βιβάω as compared with ἔβην. This meaning easily develops into the intensive, and in all languages the desire for emphasis in time reduces the intensive to the value of the simple verb, as in μίμνω, ἴσχω beside μένω, ἔχω. To this type also belong the verbs in -έjo-, as in φορέω (§ 497).

(5) An action is said to be terminative when it indicates the beginning or the end of the action, as in English **aim, start, throw** beside **hit**. To this class originally belonged the nasal-presents (§§ 460-7) like ἄγνυμι, ᾄρνυμι, δάμνημι; and also the presents in -σκω (§ 469), as βάσκω, which however often became iterative.

§ 425. No one Greek verb has or could have all the forms which are associated with the full verbal-system. A present could not be formed from a base or stem which expressed momentary or aoristic action unless the base or stem was modified by a formative element; and on the other hand no base or stem expressing cursive action could occur in the second aorist, Hence arose the series

of defective verbs with presents but no aorists or with aorists but no presents, as *φέρω* : *ἤνεγκον*, cp. Lat. *fero* : *tulī*, *ἔδω*, *ἔσθίω* : *ἔφαγον*, *ἔρχομαι* : *ἤλυθον*, *λέγω* : *εἶπον*, *ὁράω* : *εἶδον*.

§ 426. *Tense-formation* : In the parent Indg. language there were strictly speaking only two tense-formations, viz. the present-aorist-system and the perfect. The present-aorist-system contained a present and an aorist form which arose from the same base or stem through a difference in accent. The forms mostly used as presents with cursive meaning had the accent in the singular of the active on the first syllable of the base which had the strong grade of ablaut, and in all other forms the accent was on the personal ending and the base had the weak grade of ablaut. The forms with momentary or aoristic meaning had the accent on the second syllable of the base in all forms and it therefore had the strong grade of ablaut. This is called the second or strong aorist. The reason why this difference of meaning should be associated with the difference in accent is uncertain, see Brugmann, *Kurze vergleichende Grammatik*, pp. 507-8. In Greek the tense-system was most completely carried out in the denominative verbs, because such verbs originally possessed no particular mode or manner of action.

The present in the narrower sense had no special characteristic to denote time unless we may regard the primary personal endings as such.

The imperfect belongs to the present stem. The difference between this tense and the second aorist was often one of syntax rather than of form, because forms of the same nature were used partly as imperfects and partly as aorists, cp. forms like *ἔφην*, *ἔγραφον*, *ἔγλυφον* beside the similarly formed aorists, *ἔστην*, *ἔτραφον*, *ἔφυγον*.

There were originally no special forms which were exclusively used to express the future. But forms with

momentary meaning could be used for the future, as *εἶμι*, *νέομαι*. The ordinary future in Greek was originally the subjunctive of the s-aorist (§ 499). The future passive and future perfect were special Greek new formations (§ 501).

The second aorist and the s-aorist had come to have the same meaning already in the parent Indg. language (§ 502). The passive aorist in *-θην* was a special Greek new formation (§ 514).

So far as syntax is concerned the perfect was originally a special kind of present which denoted a state of the subject resulting from a previous action. For the special characteristics of the perfect see § 515.

The Greek pluperfect is simply a preterite form developed from the perfect stem. See § 523.

§ 427. **Moods:** The parent Indg. language had four moods—the indicative, subjunctive (§§ 525–9), optative (§§ 530–8), and imperative (§§ 539–44)—all of which were preserved in Greek and Vedic. The so-called injunctive is strictly speaking not a mood, because it merely consists of unaugmented indicative forms with secondary personal endings (§ 524). Greek and Vedic are the only languages which preserved the original distinction between the subjunctive and optative in form and meaning. But even in Vedic the distinction began to disappear and with the development of the sjo-future (§ 498) the subjunctive disappeared entirely in classical Sanskrit, and the optative came to be used for both. It was also supplanted by the optative in the prehistoric period of the Germanic and Baltic-Slavonic languages. And although subjunctive and optative forms were preserved in Latin, they became confused in usage already in the prehistoric period of the language. Some scholars doubt whether the parent Indg. language possessed a subjunctive with the function and meaning that we usually associate with it. They are

inclined to regard it as being originally an indicative with momentary meaning which was used to express the future action. In this manner they account for the fact that what we call the subjunctive in Greek partly corresponds in form to the future in Latin, as *ἔω* from **έσω*, *φέρητε* = Lat. *ero*, *ferētis*.

§ 428. It is not always easy to draw a hard and fast line between indicative and subjunctive forms. In Greek we have the original subjunctive of the s-aorist used as the future; in Homer forms like *ἀλγήσετε*, *ἀμείψεται*, &c. (§ 526) are sometimes futures and sometimes aorist subjunctives; the subjunctive of the athematic verbs corresponds in form to the indicative of the thematic, cp. Hom. *ἵομεν* beside *φέρομεν*.

Possibly the optative (§§ 530-8) was originally merely a characterized present denoting *wish*. The s-aorist of the optative was a special Greek new formation.

Already in the parent Indg. language the imperative system was made up of several distinct formations which included (a) injunctive forms, (b) forms with the bare stem, and (c) compound forms. See §§ 539-44.

REDUPLICATION.

§ 429. Reduplication had become a part of the verbal-system already in the parent Indg. language, and was originally used to express iterative or intensive action. At a later period it also came to be used as a tense-forming element. It was preserved in Greek, Aryan, Latin, Gothic and Old Irish. There were originally three types of reduplication, type (a) with *ī* in the reduplicated syllable, type (b) with *ē* in the reduplicated syllable, and type (c) with the whole syllable reduplicated. The tenses which had reduplication were the present, aorist and perfect.

The reduplicated presents originally had *ī* beside *e*, but the exact relation in which *ī* stood to *e* is unknown. The

i became generalized in the Greek presents except perhaps in one or two isolated forms like Hom. κέ-κλυ-θι, pl. κέ-κλυ-τε, whereas both types were preserved side by side in Sanskrit, as γίγνομαι : Lat. gigno, μίνω, δίδασκω, ἵζω from *σισδω, ἴσχω from *σισχω, πίμπλημι (Skr. pí-parṃi, I fill), πίμπρημι, both verbs with -μ- after the analogy of πιμπλάνω (§ 466); ἵστημι from *σιστᾶμι : Lat. sistit, Skr. tí-ṣṭhati, he stands; but τίθημι from *θιθημι beside Skr. dá-dhāmi, δίδωμι beside Skr. dá-dāmi.

The aorist had e which was regularly preserved in Greek, as ἔπε-φνον, inf. πε-φνέμεν, ἔσπομην from *σε-σπομᾶν, and similarly κεκλόμην, κεχαρόμην, λελαθέσθαι, λελαβέσθαι, πέφραδον : φράζω, πέπιθον, τετυκεῖν, &c.

The perfect generally had e, as δέδορκα, γέγονα = Skr. dadārśa, jajāna, for other examples see §§ 516-22. Beside e there also existed ē which is rare in Greek (cp. Hom. δη-δέχεται : δέχομαι) but common in Vedic as vā-várta beside va-várta, he has turned, see Whitney, *Sanskrit Grammar*, § 786. On the consonants in the reduplicated syllable of the perfect see § 517.

Type (c), which consisted of the reduplication of the whole syllable, was the oldest mode of reduplication. Here it is necessary to make two sub-divisions according as the base or stem began with a consonant or a vowel. (1) When it began with a consonant the reduplication was not a tense-forming element but belonged to the whole verb, as γαρ-γαίρω, μαρμαίρω, πορφύρω, παμφαίνω, cp. also Lat. murmurāre, tintinnāre. In a small number of verbs the formation of the reduplicated syllable is not clear, (a) with ι in the reduplicated syllable, as δαιδάλλω, παιπάλλω (Hesych.), μαιμάω, παιφάσσω, ποιπνύω, ποιφύσσω, (b) with a nasal or liquid, as γογγύλλω, γαγγαλίζω beside γαργαλίζω; ἐργή-γορα. (2) When it began with a vowel, as ἀρ-αρίσκω; ἀκ-ήκοα, ἀλ-ήλεμαι, ἄρ-ᾶρα, ὀλ-ῶλα, ὀμ-ῶμοκα, ὄρ-ῶρα; ἦγ-αγον, ἦν-εγκον, ἦρ-αρον, ὄρ-ορον; ἀγ-αγεῖν,

ἀλ-αλκεῖν, ἀρ-αρεῖν, ἐν-εγκεῖν, ὀρ-ορεῖν, &c.; ἐρύκ-ακον : ἐρύκω, ἡνίπ-απον : ἐνίπτω. See § 233.

The reduplicated aorist was common in the language of the epic, but in the later language only a few examples were preserved, as ἡγαγον, ἡνεγκον.

THE AUGMENT.

§ 430. The augment (Indg. *e* = *é*-, Skr. *a*-, Arm. *e*-) was originally a temporal adverb denoting the past, and gradually became used in the so-called imperfect, aorist and pluperfect indicative to express the past tense, because the verbal forms as such possessed no inherent characteristic which indicated the past tense. When it stood in the parent Indg. language before consonants it is called the syllabic augment, as in Indg. **ébherom* = *ἔφερον*, Skr. *ábharam*; and when it underwent contraction with a following vowel it is called the temporal augment, as in Indg. **ésm̐* from **é-esm̐* = Hom. *ἦα*, Skr. *āsam*. The augment had become an integral part of the verbal system already in prim. Indo-Germanic and always had the principal accent of the compound form, as in **ébherom* beside **bhérom*. It was preserved in Greek, Aryan and Armenian, but in the other Indg. languages it either disappeared altogether or was only preserved in isolated forms. When the time of the action was sufficiently indicated by the context the augment was not used in the parent language, so that forms like **ébherom* and **bhérom* existed side by side without any distinction in meaning. After the analogy of the augmented forms the unaugmented forms also acquired in the course of time a preterite meaning independently of the context. This accounts for the optional use of the augment in Vedic, Homer and in later Greek poetry. The augmented forms became generalized in Sanskrit. They had also become general in the oldest

period of Greek prose except in the pluperfect where both forms existed side by side, as in *ἐπεπόνθη, ἐπεπόνθειν* beside *πεπόνθη, πεπόνθειν*, and in the Ionic iterative forms in *-σκον* which never have the augment, as *φεύγεσκον, φύγεσκον, λάβεσκον*. *ἐχρήν* was a new formation beside the regular form *χρήν* which was a contraction of *χρή ἦν*.

In verbs compounded with a preposition the augment stood between the component parts, as in *ἀπ-έ-βαλον, περι-έ-βαλλον, παρ-έ-σχον*, cp. Skr. imperf. *ud-ā-patat* beside the pres. *ut-pātati, he flies up*. In a few cases the compound verb came to be regarded as a simplex and then had the augment in front of the preposition, as *ἐκάθιζον, ἐκάθειδον* beside *καθηύδον*, epic *καθειδον* with temporal augment; or with both elements augmented, as *ἦν-ει-χόμεν, ἦν-εσχόμεν, ἦμφ-εσβήτουν*.

Verbs compounded with the inseparable particle *δυσ-* have the augment in front of it, as *ἐδυστύχουν*; the same rule also applies to verbs derived from compound nouns, as *ἐμῦθολόγησα*, but if the first element was a preposition the augment was sometimes placed after it on analogy with verbs of the type *ἀπ-έ-βαλον*, as *ἀπ-ε-λογησάμην*.

The syllabic augment also occurred originally in verbs which began with *s-* and *j-*, but these sounds disappeared in prim. Greek and the loss of them gave rise to various contractions and analogical formations. *έ-ε-* regularly underwent contraction (Att. *ει-*, Dor. *η-*) after the loss of *σ-* and *γ-* in the combinations *έ-σε-*, *έ-γε-*, as Att. *είχον*, Dor. *ἦχον* from **έσεχον*; *είρπον*, Dor. *ἦρπον* from **έσερπον*, cp. Lat. *serpo*; *είπόμεν* from **έσεπομην*, cp. Lat. *sequor* (§ 219); *είστέκειν* from **έσεττεκειν*; *είμεν* from **έγεμεν*. In all other combinations we have the temporal augment after the analogy of verbs which originally began with a vowel, as *ἴζον* for **είζον* from **έσιζον*: *ἴζω*, and similarly *ύγίανω*: *ύγαίανω*, *ώρμησα*: *όρμάω*, *ήνυτο*: *ανῦμι*, &c. On the double consonants in the original initial combination *s+*

nasal or liquid, see the phonology, as in Hom. ἔλλαβε, ἔρρεον (§ 215), ἔμμαθεν, ἔννεον (§ 214).

Verbs, which originally began with *w-* = *f-* have the syllabic augment in Homer, but contraction in Attic where possible, as Hom. ξιδον, Att. εἶδον, Lesb. εὔιδον from *ἐφιδον; Hom. ξειπον, Att. εἶπον; Att. εἰργαζόμεν, εἵκαζον beside ἡργαζόμεν, ἦκαζον with temporal augment; Hom. ἐέσσατο, ἐάνδανε, &c., Att. ἐωνούμην, ἐώθουν beside ὥθουν with temporal augment. Forms like Att. φκησα, ὠργίσθην, ὠρθωσα, &c., Hom. ὠφελον were new formations with the temporal augment. ἔρριπτον from ἐφρίπτον : ῥίπτω, and similarly ἔρρηξα.

Beside *e-* there seems also to have been a form *ē-* (= Skr. ā-) in prim. Indo-Germanic, which occurred before verbs beginning with *w-*, *j-* or *r-*, as in Hom. ἡ-εἶδη, Att. ἡδεῖν, Hom. ἀπ-η-ύρα from *ἀπ-η-φρα, cp. Skr. impf. ā-vṛṇakti : pres. vṛṇakti, *he turns round*. Some scholars assume that such an *h-* occurs in ἡβουλόμεν : βούλομαι, ἡμελλον : μέλλω, ἡδυνάμην : δύναμαι, but it is more probable that these were new formations after the analogy of ἡθελον : ἐθέλω beside θέλω.

It is difficult to account satisfactorily for forms like ἐάων : ἀλίσκομαι, ἐώρων, ἐώρων : ὁράω, with the rough breathing from the present, ἐάγην : ἀγνῦμι, ἀν-έφξα : οἴγνῦμι. They contain either both the syllabic and the temporal augment or else they had originally the syllabic augment *η-* and then underwent quantitative metathesis whereby ἡα-, ἡο- became ἐα-, ἐω- (§ 72).

§ 431. The augment became contracted in prim. Indo-Germanic with verbal forms beginning with *e-*, as Indg. *e-sm from *é-esm = Hom. ἦα, Skr. āsam, *I was*; Indg. *e-ijm from *é-ejm = ἦα for *ἦα (§ 453), Skr. āyam, *I went*. It is probable that *e-o-* (ὤζον : ὄζω) and *e-a-* (ἦγον, Dor. ἀγον : ἄγω, cp. Skr. impf. ājam : pres. ājāmi, *I drive*, Lat. ēgī : ago) also became contracted in the parent Indg. language.

After the analogy of these and similar forms there arose in prim. Greek the system of simply lengthening the vowel in the augmented tenses of verbs beginning with a vowel, as ἤθελον : ἐθέλω, ἤλπιζον : ἐλπίζω, ἤμπέδουν : ἐμπεδόω; ἔαινον : ἐαίνω, ἔκετεον : ἰκετεύω; ἔφηνα : ὑφαίνω, ἔγίαινον : ὑγίαινω; ὤδαζον : ὀδάξω, ὠμίλουν : ὀμιλέω.

The long diphthong, which occurred in the augmented tenses of verbs beginning with a diphthong, was regularly shortened in prim. Greek (§ 33), as in Ion. αἴτεε, αἴξετο, εὔχετο. Later new formations were forms like ἦτεον, ἦτουν : αἰτέω, ηὔξον : αὐξάνω, ηὔχόμεν : εὔχομαι, ῥήσα : οἰδέω.

THE PERSONAL ENDINGS.

§ 432. The parent Indg. language had two kinds of personal endings—primary and secondary—, the former occurred in the present indicative active and middle, the so-called *s-* or *sjō-* future, and the indicative perfect middle, and the latter in all the augmented tenses of the indicative active and middle, the so-called injunctive forms of the imperative, and the optative. The subjunctive had originally partly primary and partly secondary endings. In Greek it has the same endings as in the present indicative. The indicative perfect active had its own special endings for the three persons of the singular. On the endings of the imperative see §§ 539-44.

The original system and distribution of the personal endings were better preserved in Sanskrit than in any of the other Indg. languages. The original distinction between the primary and secondary endings was only preserved in Greek in the first and second persons of the singular and in the third person of all numbers. Only scanty fragments of the athematic conjugation were preserved in Latin and the Germanic languages, and even in Greek many verbs passed over into the thematic conjuga-

tion, which remained athematic in Sanskrit. In Sanskrit the ending **-mi** of the athematic conjugation was extended by analogy to the thematic.

Of the origin of the personal endings nothing is known with any degree of certainty or even probability notwithstanding all that has been written upon the subject. It is sometimes assumed that they were partly or entirely of pronominal origin, but this is a theory which can neither be proved nor disproved. It is also unknown which of the two kinds of endings is the older or in what etymological relation they originally stood to each other. And in like manner the formal relation between the active and middle primary and secondary endings is equally obscure.

I. THE ENDINGS OF THE ACTIVE.

Singular.

§ 433. The primary endings of the first person were **-mi** in the athematic and **-ō** in the thematic verbs, as Lesb. *ἐμί*, Att. Ion. *εἰμί*, Skr. *ásmi*, Goth. *im*, Lith. *esmi*, O.Slav. *jesmī*, *I am*; *δίδωμι*, *τίθημι* = Skr. *dádāmi*, *dádhami*; *ἵστημι*, *δείκνυμι*, *δάμνημι*. *φέρω*, Lat. *fero*, Goth. *baíra*, but Skr. *bhárā-mi* with **-mi** from the athematic verbs; fut. *λείψω*, *λύσω*, *θήσω*, *δώσω*, *στήσω*, *δείξω*; subj. *ἔω*, *ᾤ* from **esō* = Lat. *ero* (fut.), *λείπω*, *τιθῶ*, *διδῶ*, *δεικνύω*.

NOTE.—In Boeot. Lesb. Thess. Arcad. and Cyprian the denominative verbs in *-άω*, *-έω*, *-όω* often had the ending *-μι* after the analogy of the athematic verbs; and similarly in Homer in the subjunctive, as *ἐθέλωμι*, *ἀγάγωμι*, *εἴπωμι*, &c.

The original secondary ending was **-m** or **-m̐** according as the preceding sound was a vowel or a consonant, as *ἔφερον* (§ 141) = Skr. *ábharam*, cp. Lat. *amābam*; *ἐτίθην*, *ἔστην* = Skr. *ádadhām*, *ásthām*, *éḍun*; *εἶην* from **éσῃν* = Skr. *syām*, Lat. *siem*, *sim*; *τιθείην*, *διδόειν*, *θείην*, *δοίην*. *ῆ*, Hom. *ῆα* from Indg. **ésm̐* = Skr. *ásam* for **ása* with

-m from forms like *ábharam*; $\epsilon\pi\epsilon\psi\alpha$ = Skr. *ápākṣam*, $\epsilon\lambda\upsilon\sigma\alpha$; opt. of the thematic verbs, as Skr. *bhárēya-m*, but Gr. $\phi\acute{\epsilon}\rho\omicron\iota\mu\iota$ for $\phi\epsilon\rho\omicron\alpha$ or $\phi\acute{\epsilon}\rho\omicron\iota\alpha$; after the analogy of $\tau\acute{\iota}\theta\eta\mu\iota$: $\tau\acute{\iota}\theta\eta\varsigma$ so to $\phi\acute{\epsilon}\rho\omicron\iota\varsigma$ was formed $\phi\acute{\epsilon}\rho\omicron\iota\mu\iota$, and similarly $\delta\epsilon\iota\kappa\upsilon\lambda\omicron\iota\mu\iota$, &c.

§ 434. The primary ending of the second person was **-si** which was only preserved in Homer and Syracusan $\epsilon\sigma\text{-}\sigma\acute{\iota}$, Indg. ***es-si**, beside $\epsilon\acute{\iota}$, Skr. *ási*, Indg. ***esi**; $\epsilon\acute{\iota}$ from $\ast\epsilon\acute{\iota}\text{-}\sigma\iota$ = Skr. $\acute{e}\text{-}\xi\acute{\iota}$, Lith. *ei-sì*. In Greek the other athematic verbs had the secondary ending, cp. $\tau\acute{\iota}\theta\eta\varsigma$, $\delta\acute{\iota}\delta\omega\varsigma$ beside Skr. *dádhāsi*, *dádāsi*. The regular form of the thematic verbs would have been $\ast\phi\acute{\epsilon}\rho\epsilon\iota$ from $\ast\phi\acute{\epsilon}\rho\epsilon\sigma\iota$ = Skr. *bhárasi*, Indg. ***bhéresi**; $\ast\phi\acute{\epsilon}\rho\epsilon\iota$ became $\phi\acute{\epsilon}\rho\epsilon\iota\varsigma$ with secondary ending after the analogy of $\epsilon\acute{\xi}\phi\epsilon\rho\epsilon\varsigma$; and similarly Hom. $\epsilon\acute{\iota}\varsigma$ for $\epsilon\acute{\iota}$ after the analogy of forms like $\tau\acute{\iota}\theta\eta\varsigma$; the regular form of the subjunctive would have been $\ast\phi\epsilon\rho\eta$ from $\ast\phi\epsilon\rho\eta\sigma\iota$ = Skr. *bhārāsi*, Indg. ***bhérēsi**; $\phi\acute{\epsilon}\rho\eta\varsigma$ was a new formation like $\phi\acute{\epsilon}\rho\epsilon\iota\varsigma$; and similarly $\tau\acute{\iota}\theta\eta\varsigma$, $\delta\epsilon\iota\kappa\upsilon\lambda\eta\varsigma$, &c.

The secondary ending was **-s**, as $\epsilon\acute{\xi}\phi\epsilon\rho\epsilon\varsigma$, $\epsilon\acute{\sigma}\tau\eta\varsigma$, $\phi\acute{\epsilon}\rho\omicron\iota\varsigma$ (Goth. *baíraís*), $\epsilon\acute{\iota}\eta\varsigma$ (Lat. *siēs*, *sīs*) = Skr. *ábharah*, *ásthāh*, *bhārēh*, *syāh*.

§ 435. The primary ending of the third person was **-ti** which was preserved in all the dialects in $\epsilon\sigma\text{-}\tau\acute{\iota}$ = Skr. *ásti*, Lat. *est*, Goth. *ist*, Lith. *ės-ti*; it remained in the athematic verbs in Dor. Boeot. and the North-West Greek dialects, but became **-σι** (§ 189) in Att. Ion. and Lesbian, as Dor. $\tau\acute{\iota}\theta\eta\tau\iota$, $\delta\acute{\iota}\delta\omega\tau\iota$, Att. $\tau\acute{\iota}\theta\eta\sigma\iota$, $\delta\acute{\iota}\delta\omega\sigma\iota$ = Skr. *dádhāti*, *dádāti*. The regular form of the thematic verbs would have been Dor. $\ast\phi\acute{\epsilon}\rho\epsilon\tau\iota$, Att. $\ast\phi\acute{\epsilon}\rho\epsilon\sigma\iota$ = Skr. *bhárati*, but all the dialects have $\phi\acute{\epsilon}\rho\epsilon\iota$ which was formed after the analogy of $\phi\acute{\epsilon}\rho\epsilon\iota\varsigma$. The regular form of the subjunctive would have been Dor. &c. $\ast\phi\acute{\epsilon}\rho\eta\tau\iota$, Att. &c. $\ast\phi\acute{\epsilon}\rho\eta\sigma\iota$ = Skr. *bhārāti*, Indg. ***bhérēti**; Att. &c. $\phi\acute{\epsilon}\rho\eta$ was formed after the analogy of $\phi\acute{\epsilon}\rho\epsilon\iota$; and similarly Hom. $\phi\acute{\epsilon}\rho\eta\sigma\iota$, $\acute{\alpha}\gamma\acute{\alpha}\gamma\eta\sigma\iota$, $\acute{\epsilon}\theta\acute{\epsilon}\lambda\eta\sigma\iota$, &c., with **-σι** from $\tau\acute{\iota}\theta\eta\sigma\iota$, &c.; $\acute{\iota}\sigma\tau\acute{\eta}$, $\tau\acute{\iota}\theta\acute{\eta}$, $\sigma\tau\acute{\eta}$, $\theta\acute{\eta}$, &c.

The secondary ending was **-t** which regularly disappeared in prim. Greek (§ 230), as *ἔφερε, ἔσθη, φέροι, εἶη* (Lat. *sit*) = Skr. *ábharat, ásthāt, bhārēt, syāt*; Dor. &c. *ῆς* from **ῆστ* = Indg. **ést, he was*.

Dual.

§ 436. The first person of the dual was preserved in Sanskrit, Gothic and the Baltic-Slavonic languages, but it disappeared in the prehistoric period of Greek, and its place was taken by the first person plural.

The original primary ending of the second person was **-t(h)es** (= Lat. *-tis* which became used for the plural) or **-t(h)os**, Skr. *-thaḥ* can be from either form, beside the secondary ending **-tom** = *-τον*, Skr. *-tam*. The original distinction was preserved in Sanskrit, but in Greek the secondary ending came to be used for both kinds, cp. *ἔσ-τόν, τίθετον, φέρετον* beside Skr. *s-tháh, dhat-tháh, bhára-thaḥ*, and *ῆσ-τον, ἐτίθετον, ἐφέρετον* beside Skr. *ás-tam, ádhat-tam, ábhara-tam*.

The original primary ending of the third person was **-tes** = Skr. *-taḥ*, beside the secondary ending **-tām** = *-τᾱν, -την*, Skr. *-tām*. In Greek the *-τον* of the second person came to be used for the primary ending, as *ἔσ-τόν, τίθετον, φέρετον*, but Skr. *s-táh, dhat-táh, bhára-taḥ*, beside *ῆσ-την, ἐτιθέτην, ἐφερέτην, φερούτην* = Skr. *ás-tām, ádhat-tām, ábhara-tām, bhárē-tām*. Owing to the fact that *-τον* was used both as primary and secondary ending in the second person it also became used occasionally for the secondary ending of the third person, and conversely *-τᾱν, -την* instead of *-τον* also became used occasionally in the augmented tenses of the second person.

Plural.

§ 437. The original primary ending of the first person was **-mes** beside **-mos**, the former corresponding to Dor.

-*mes* and the latter to Lat. -*mus*, Skr. -*maḥ* can be either form. The secondary ending was probably -*men* beside -*mṇ*, the former corresponding to Att. &c. -*μεν* and the latter to Skr. -*ma*. Sanskrit preserved the original distinction between the primary and secondary endings, but in Greek -*mes* became generalized in Doric and the dialect of Delphi and -*μεν* in the other dialects, as Dor. *φέρομες*, Att. &c. *φέρομεν*, Dor. *εἰ-μέες*, Att. *ἔσ-μέν* (Hom. *εἰ-μέν*), *τίθεμεν*, but Skr. *bhārā-maḥ*, *s-māḥ*, *dadh-māḥ*; Att. &c. *ἐφέρομεν*, *ἐτίθεμεν* = Skr. *ābhārā-ma*, *ādadh-ma*.

§ 438. The original primary ending of the second person was probably -*the* = Skr. -*tha* beside the secondary ending -*te* = Skr. -*ta*. This distinction was not preserved in the other branches of the Indg. languages. In all these languages -*te* was used for both kinds of endings, as *ἔσ-τέ* (O.Slav. *jes-te*), *τίθετε*, *φέρετε* (O.Slav. *berete*), but Skr. *s-thá*, *dhat-thá*, *bhāra-tha*, beside *ῆ-τε* (*ῆσ-τε*), *ἐτίθετε*, *ἐφέρετε*, *ἐφοριτε* = Skr. *ās-ta*, *ádhat-ta*, *ābhara-ta*, *bhārē-ta*.

§ 439. The original primary endings of the third person were: -*énti*, -*ṇti*, -*nti* beside the corresponding secondary endings -*ént*, -*ṇt*, -*nt*.

The accented form -*énti* only occurred after consonants in the present indicative of the non-reduplicated athematic verbs. It regularly became -*ánti* in Sanskrit, as *s-ánti* = Dor. *ἐντί*, Att. *εἰσί* (both forms with the smooth for the rough breathing after the analogy of the singular), Goth. *sind*, Indg. **s-énti*, *they are*; Skr. *sunv-ánti* : *sunō-mi*, *I press out*; *krīṇ-ánti* : *krīṇā-mi*, *I buy*, corresponding to prim. Gr. **δεικνῦ-εντι* : *δείκνῦ-μι*, **δάμν-εντι* : *δάμνη-μι*. The only regular form preserved in Greek was Dor. *ἐντί*, Att. *εἰσί*. In all other verbs belonging to this type -*énti* was supplanted either by the postvocalic form -*nti* of the thematic verbs like Dor. *φέρου-ντι*, Att. *φέρουσι* or by the analogical formation -*αντι* (see below), and then the third

person came to be formed from the stem-form of the dual and of the other persons of the plural + *-ντι* or *-αντι*, as Dor. *φα-ντί*, Att. *φᾶσί*, Ion. *δεικνῦσι* from **δεικνυ-ντι* but with the circumflex accent after the analogy of *ιστᾶσι*, *δαμνᾶσι* from **δαμνα-ᾶσι* older *-αντι*, *δεικνύ-ᾶσι*, *ἰᾶσι* from **ἰ-αντι* beside Skr. *y-ánti* from Indg. **j-énti* (§ 453).

The regular prim. Greek primary ending of the present of the reduplicated athematic verbs was *-ατι* = Indg. *-nti*, as in **ἴστ-ατι*, **τίθ-ατι* = Skr. *dádḥ-ati*, **δίδ-ατι* = Skr. *dád-ati*. This ending was preserved in the Hom. perfects *πεφύκ-ᾶσι*, *λελόγγ-ᾶσι*, but it disappeared in the present and its place was taken either by the postvocalic form *-ντι* or by the analogical form *-αντι*, as Dor. *τίθε-ντι*, *δίδο-ντι*, *ἴστα-ντι*, but Att. *τιθέ-ᾶσι*, *διδό-ᾶσι*, *ιστᾶσι*, from **τιθε-αντι*, **διδο-αντι*, **ἴστα-αντι*, formed in both dialects from the stem-form of the dual and of the other persons of the plural; and similarly Hom. *τιθεῖσι*, *διδούσι* = Dor. *τίθεντι*, *δίδοντι*, but with the circumflex accent after the analogy of *ιστᾶσι*.

The primary ending of the thematic verbs was *-ντι*, as in Dor. *φέρο-ντι*, Att. Ion. *φέρουσι*, Boeot. *-νθι*, Arcad. *-νσι*, Lesb. *-οισι* from *-ο-ντι* = Skr. *bháranti*, Lat. *ferunt*, Goth. *baírand*, Indg. **bhero-nti*; subj. Dor. *φέρω-ντι*, Att. Ion. *φέρωσι*.

The original secondary endings were: *-ént*, *-nt* and *-nt*. The accented form *-ént* occurred after consonants in the imperfect of the non-reduplicated athematic verbs and in the optative, as Hom. *ῆεν*, *ῆν*, Dor. &c. *ῆν* which came to be used for the third person singular = Skr. *ás-an* with regular loss of final *-t*, Indg. **és-ent*, *they were* (§ 452); Skr. *ásunv-an*, *they pressed out*; *ákrīn-an*, *they bought*, corresponding to prim. Gr. **ἔδεικν-εντ*, **ἔδαμν-εντ*, see below; opt. *εἶεν* from **ἔσεντ* (§ 230), O.Lat. *sient*, later *sint*; *φέροιεν* from **φεροῖεντ*, and similarly *δεικνύοιεν*, *ισταίεν*, *τιθείεν*, *διδοίεν*, *σταίεν*, *θείεν*, *δοίεν*; *λίποιεν*, *φανοίεν*,

λῦσοιεν, λῦσαιεν, but λῦσειαν, δείξειαν with -αν for -εν after the analogy of the aorist indicative.

The secondary ending -nt = prim. Gr. -α(τ) occurred after consonants in the imperfect of the reduplicated athematic verbs and in the s-aorist, as prim. Gr. *ἔδιδ-α(τ), *ἔτιθ-α(τ), *ἔδειξ-α(τ). The ending -α(τ) was not preserved in the historic period of any of the dialects. From the stem-form of the dual and of the other persons of the plural were formed ἔτιθε-ν, ἔδιδο-ν with -ν after the analogy of thematic verbs like ἔφερο-ν, and similarly ἔθε-ν, ἔδο-ν, ἔστα-ν; and in like manner *ἔδειξα became ἔδειξαν after the analogy of ἔφερο-ν, and similarly ἔλυσαν, ἔφηναν, ἦσαν (for *ἦαν after the analogy of ἦσ-τε). Forms like ἦσαν, ἔδειξαν, ἔλυσαν gave rise to two kinds of new formations. (1) To the new secondary ending -αν there was formed a new primary ending -αντι = -ᾱσι after the analogy of ἔφερο-ν: φέρο-ντι, as δαμνᾶσι, δεικνύᾱσι, τιθέᾱσι, διδῶᾱσι, ἰσθᾶσι, see above. (2) The ending -σαν became extracted as a personal ending and then extended to the imperfect and aorist of athematic verbs and also to the optative, as ἴστασαν, ἐτίθεσαν, ἐδίδοσαν, ἐδείκνυσαν; ἔστησαν, ἔθεσαν, ἔδοσαν, ἔδυσαν; ἰσταίησαν, τιθείησαν, διδοίησαν; σταίησαν, θείησαν, δοίησαν.

The secondary ending -nt regularly occurred after vowels, as ἔφερον = Skr. ábharan, Indg. *ébhero-nt; ἔλιπον, ἔγνον from *ἔγνωντ, ἔβαν from *ἔβαντ (§ 70).

Perfect.

§ 440. Singular: The Indg. ending of the first person was -a which remained in Greek, as οἶδα, δέδορκα = Skr. véda, dadárśa.

The original ending of the second person was -tha which was regularly preserved in ἦσ-θα (originally the perfect), Indg. *ἔs-tha, cp. Skr. ásitha; οἶσθα = Skr. vét-tha, and likewise originally with all stems ending in a dental, as

*πέποισθα, *λέλησθα (§ 110). In these and similar forms the -σθα came to be regarded as a personal ending and was then extended to other tenses, as Hom. τίθησθα, φῆσθα; ἐθέλησθα, εἶπησθα, πάθησθα; βάλοισθα, κλαίοισθα. The ordinary ending -ας, as in λέλοιπας, was a new formation from the first aor. indicative owing to the ending of the first person being alike in both tenses. And conversely the first aor. ending -ε of the third person was from the perfect for a like reason.

The original ending of the third person was -e which remained in Greek, as οἶδε, δέδορκε = Skr. védā, dadārśa.

§ 441. With the exception of the first person plural the Greek and Sanskrit endings of the dual and plural are entirely different, cp. Skr. dual -vá, -áthur, -átur; plural -má, -á, -úr. On Skr. -má beside Gr. -μεν see § 437. In Greek the endings are the same as in the present indicative, as ἴσ-τον, ἴσ-τον; ἴσ-μεν (Hom. ἴδ-μεν, Skr. vid-má), ἴσ-τε, ἴσ-ασι from -αντι (§ 69); λελοίπ-α-τον, λελοίπ-α-μεν, λελοίπ-α-τε, λελοίπ-ασι. The -α- in these forms was of the same origin as in the first aor. indicative, ἐλύσα-τον, ἐλύσα-μεν, &c. (§ 507). On the perfect ending -ασι in Hom. πεφύκ-ασι, λελόγχ-ασι see § 439.

2. THE ENDINGS OF THE MIDDLE.

Singular.

§ 442. It is impossible to determine what were the original primary and secondary endings of the first person. The Greek primary ending -μαι and the secondary ending -μην, -μᾶν are not found in any of the other Indg. languages. It is possible that -μαι was originally the primary ending of the athematic verbs which became generalized in Greek. The original ending of the perfect seems to have been -ai which corresponds to the -ē in Skr. tutud-ē = Lat. tutud-ī (originally the middle). Sanskrit then generalized the -ē, cp. τίθεμαι : Skr. dadh-ē, φέρομαι : Skr. bhār-ē, and

similarly δείκνυμαι, δάμναμαι; τιθῶμαι, φέρωμαι; δέδομαι : Skr. *dad-ē*, and similarly δέδειγμαι, λέλυμαι, γέγραμμαι.

Secondary ending -μην : ἐτιθέμην, ἐδιδόμην, ἐδεικνύμην, ἐφερόμην; τιθείμην, διδοίμην, φερόίμην; ἐδεδόμην, ἐδείγμην, ἐλελύμην. The origin of this ending is obscure.

§ 443. The original primary ending of the second person was -sai = -σαι, Skr. -sē, Goth. -za, as τίθεσαι, δίδοσαι, δέδοσαι = Skr. *dhat-sē*, *dat-sē*, *dadi-šē*; φέρσαι, φέρη (written -ει on Attic inscriptions from the fourth century B.C. onwards) = Skr. *bhāra-sē*, Goth. *baíra-za*; φέρηαι, φέρη for the regular form *φέρεα; γέγραψαι, τέτρῳψαι. The intervocalic -σ- regularly disappeared, as in φέραι, φέρη (§ 213, 2), but in Attic and Ionic the -σ- was restored in the present and perfect of the athematic verbs after the analogy of perfects the stem of which ended in a consonant, as in γέγραψαι, and similarly in the imperfect and pluperfect.

The original secondary ending was -so in the thematic and -thēs = -της, Skr. -thāḥ in the athematic verbs. Greek generalized the former and Sanskrit the latter form, cp. ἐτίθεσο, ἐδίδοσο, ἐφέρεο, ἐφέρου beside Skr. *ádhat-thāḥ*, *ádat-thāḥ*, *ábhara-thāḥ*; ἔθου, ἔδου; τιθείω, διδοίω, φέροιο; ἐλύσω (Hom. -αο, Dor. -ā), ἐπρίω; ἐδέδοσο, ἐέγραψο, ἐέλυσο. On the intervocalic -σ- see above. The secondary ending -thēs was preserved in the aor. passive ἐδόθης = Skr. *ádi-thāḥ*.

§ 444. The original primary ending of the third person present was -tai (= -ται, Boeot. -τη, Thess. -τει, Arcad. and Cyprian -τοι for -ται after the analogy of the secondary ending -το, Skr. -tē, Goth. -da) which remained in Greek, as τίθεται, ἡσται, φέρεται = Skr. *dhat-tē*, *ás-tē*, *bhāra-tē* (Goth. *baíra-da*). The perfect had the ending -ai = Skr. -ē, but in Greek the ending of the present was extended to the perfect, cp. δέδοται, πέπυσται beside the Skr. *dad-ē*, *bubudh-ē*.

The original secondary ending was **-to** = **-το**, Skr. **-ta**, Lat. **-tu**, as *ἔδοτο*, *ἐφάπετο*, *τιθεῖτο*, *φέρειτο* = Skr. *ádī-ta* (Lat. *da-tu-r* from **da-to-r*), *ábhara-ta*, *dadhī-tá*, *bhárē-ta*.

Dual.

§ 445. It is impossible to determine what were the original personal endings of the three persons of the dual, because the Greek and the Sanskrit endings do not agree in form.

-μεθον, the ending of the first person, is from the plural ending **-μεθα** with **-ον** from **-σθον**. According to Kühner, *Ausführliche Grammatik der griech. Sprache*, vol. ii, p. 70, it only occurs three times in good authors, viz. *περιδόμεθον*, Hom. *Il.* xxiii. 485; *ὀρμώμεθον*, Soph. *Ph.* 1079, and *λελείμεθον*, *El.* 950.

The origin of the Greek endings of the second and third persons is unknown.

The primary and secondary ending of the second person is **-σθον**, cp. *τίθεςθον*, *φέρεςθον* beside Skr. *dadh-áthē*, *bhárēthē*; *ἐτίθεςθον*, *ἐφέςθον* beside Skr. *ádadh-āthām*, *ábharēthām*.

The primary ending of the third person is **-σθον** and the secondary **-σθην**, Dor. **-σθᾶν**, as *τίθεςθον*, *φέρεςθον* beside Skr. *dadh-ātē*, *bhárētē*; *ἐτιθέσθην*, *ἐφερέσθην* beside Skr. *ádadh-ātām*, *ábharētām*.

Plural.

§ 446. The original primary ending of the first person was **-medhai** = Skr. **-mahē**, beside the secondary ending **-medhō** = **-μεθα**, Skr. **-mahi**. Greek generalized the latter form, cp. *τιθέμεθα*, *φερόμεθα* beside Skr. *dádth-mahē*, *bhārā-mahē*; *ἐτιθέμεθα*, *ἐφερόμεθα* = Skr. *ádadh-mahi*, *ábharā-mahi*. The poet. ending **-μεσθα** had its **-σ-** from **-σθε**.

§ 447. **-σθε** was used for the primary and secondary ending of the second person in all the dialects. The origin

of this form is unknown. In Sanskrit the primary ending is *-dhvē* and the secondary *-dhvam*, cp. *τίθεσθε*, *ἐτίθεσθε*, *φέρεσθε*, *ἐφέρεσθε* beside Skr. *dhad-dhvē*, *ádhad-dhvam*, *bhára-dhvē*, *ábhara-dhvam*. On forms like *ἔσπαρθε*, *ἔσταλθε* from **ἔσπαρσθε*, **ἔσταλσθε* see § 221.

§ 448. The original primary endings of the third person were *-ntai* (= *-νται*, Skr. *-ntē*, Goth. *-nda*) after vowels and *-ntai* (= *-αται*, Skr. *-atē*) after consonants. The former ending occurred in the present of the thematic verbs and the latter in the atherematic, as *φέρονται* = Skr. *bhára-ntē*, Goth. *baíra-nda*; Hom. *ῆ-αται* = Skr. *ás-atē*, Indg. **és-ntai*, Att. *ῆ-νται* was a new formation after the analogy of the thematic presents like *φέρονται*; prim. Gr. **τιθ-αται*, **διδ-αται* = Skr. *dádth-atē*, *dád-atē*. *τίθενται*, *δίδονται*, *δείκνυνται*, &c. were new formations formed from the stem-form of the dual and the other persons of the plural + *-νται* after the analogy of the thematic verbs like *φέρονται*; and similarly with the stem-form of Ion. *τιθέ-αται*, *διδό-αται*, &c. for **τιθ-αται*, **διδ-αται*, &c. The perfect had the ending *-νται* beside *-αται* just as in the present. Regular forms were: *δεδούλονται*, *βέβληνται* beside *τετράφαται*, *τετάχαται*, *κεκλίαται*, *κεχύαται*, and then after the analogy of these and similar forms were made on the one hand forms like *κέκρινται*, *λέλυνται*, and on the other hand Hom. *βεβή-αται*, &c. After about the beginning of the fourth century B.C. the perfects in *-αται* and the pluperfects in *-ατο* disappeared and their place was taken by periphrastic forms.

The secondary endings were *-nto* (= *-ντο*, Skr. *-nta*, Lat. *-ntu-*) after vowels and *-nto* (= *-ατο*, Skr. *-ata*) after consonants, as *ἐφέροντο* = Skr. *ábhara-nta*, cp. Lat. *feru-ntu-r*; *ἔμπληντο*, cp. Lat. *im-ple-ntu-r*. Hom. *ῆ-ατο* = Skr. *ás-ata*, Indg. **és-nto*, Att. *ῆ-ντο* was a new formation after the analogy of *ἐφέροντο*, &c.; prim. Gr. **έτιθ-ατο*, **έδιδ-ατο* = Skr. *ádadh-ata*, *ádad-ata*. *έτίθεντο*, *έδίδοντο*,

ἐδείκνυντο, &c. were new formations of the same kind as in the present ; and similarly with the aor. ἐλύσαντο, ἐδείξαντο, ἐπρίαντο for older *ἐλῦσ-ατο, &c. ; opt. Hom. φερούατο beside the new formations φέροντο, λύσαιντο, δείξαιντο, δεικνύοιντο, τιθεῖντο, διδοῖντο, &c. Regular forms of the pluperfect were : ἐδεδοῦλω-ντο beside ἐτετράφ-ατο, ἐτετάχ-ατο ; new formations after the analogy of the former were ἐλέλυντο, ἐέκριντο, &c. and after the latter Ion. ἐβεβλή-ατο, &c.

FORMATION OF THE PRESENT.

§ 449. The classification of the various ways in which the present was formed in Greek must be more or less arbitrary according as we regard this or that factor as being a sufficient characteristic to constitute a distinct class. In this grammar the formations of the present are divided into twelve classes, viz. Class I containing monosyllabic athematic light or heavy ablaut-bases ; Class II containing reduplicated monosyllabic athematic heavy ablaut-bases ; Class III containing verbs of the type φέρω, formed from dissyllabic light bases ; Class IV containing heavy ablaut-bases with and without reduplication ; Classes V-VIII containing the nasal-presents ; Class IX the s-presents ; Class X the sko-presents ; Class XI the dental-presents ; and Class XII the j-presents. The characteristic elements -sko-, &c. used in forming the present stem were often extended to other tense-stems. It should be noted that the word present as used above not only includes the present in the narrower sense but also the imperfect and aorist.

§ 450. In the parent Indg. language the conjugation of the present was divided into two great classes—athematic and thematic. In the athematic conjugation the personal endings were added direct to the bare base. In monosyllabic bases the accent was on the base in the active singular and on the personal endings in the dual and

plural. And the base had accordingly the strong grade of ablaut in the active singular, but the weak grade in all other forms, as **éi-mi*, *I go*, **éi-si*, **éi-ti*, pl. **i-més*, **i-t(h)é*, **j-énti*. In dissyllabic heavy bases the accent was on the first syllable of the base in the active singular and on the personal endings in the dual and plural. The first syllable of the base had accordingly the strong grade of ablaut and the second syllable the weak grade in the active singular, but in the dual and plural both syllables had the weak grade. Thus from an original base **genō*- we have the two types **génə*-, **gnó*- (§ 458). The present indicative was **génə-mi*, **génə-si*, **génə-ti*, pl. **gnə-més*, **gnə-t(h)é*, **gn(ə)-énti*, but the aorist **gnó-m*, **gnó-s*, **gnó-t*, pl. **gnó-m*- (§ 437), **gnó-te*, **gnó-nt* = ἔγνω, &c. Only middle forms of the type **génə*- were preserved in Greek, all the active forms passed over into the thematic conjugation in the prehistoric period of the language (see § 458). The athematic conjugation was well preserved in Aryan and to a great extent in Greek, but in most of the other languages, including the Latin and the Germanic, the verbs originally belonging to this conjugation almost entirely passed over into the thematic conjugation.

The thematic conjugation had the thematic vowels *-e-*, *-o-* before the personal endings (§ 456). The accent was on the root-syllable throughout the present and on the thematic vowel throughout the aorist, as **léiqō*, **léiq-e-si*, **léiq-e-ti*, pl. **léiq-o-més*, **léiq-e-t(h)e*, **léiq-o-nti* = λείπω, λείπομεν, &c., beside the aorist **liqō-m*, **liqé-s*, **liqé-t*, pl. **liqō-m*-, **liqé-te*, **liqó-nt* = ἔλιπον, ἐλίπομεν, cp. λιπεῖν with preservation of the original accent. The presents of primary verbs of the type λείπω, φέρω, &c. originally belonged to the athematic conjugation, but already in the parent Indg. language nearly all of them passed over into the thematic conjugation with the *-e-*, *-o-* from the aorist type ἔλιπο-ν, ἔλιπε-ς, &c. The *-e-*, *-o-* in the aorist type

*liqe-, *liqo- was originally an integral part of the base, but in course of time *liq- came to be regarded as the base and the -e-, -o- as part of the ending. But seeing that the accent was originally always on the -e-, -o- it is difficult to account for the difference in their quality. How the -o- came to be confined to the first person singular and the first and third persons plural, and the -e- to the other forms of the singular, dual and plural, remains an unsolved problem.

§ 451. Before beginning to compare the Greek paradigms with those of the other languages the student should read carefully §§ 432-48 dealing with the personal endings, because what is stated there about these endings will not as a rule be repeated in the following paragraphs.

CLASS I.

UNREDUPLICATED MONOSYLLABIC ATHEMATIC LIGHT OR HEAVY ABLAUT-BASES.

| § 452. | Indg. | Gr. | Skr. |
|----------|-----------------|-------|-------|
| Sing. 1. | *és-mi | εἰμί | ásmi |
| 2. | *és-si, *ési | εἶ | ási |
| 3. | *és-ti | ἐστί | ásti |
| Dual 2. | *s-tés, *s-thés | ἐστόν | stháh |
| 3. | *s-tés | ἐστόν | stáh |
| Plur. 1. | *s-més | ἐσμέν | smáh |
| 2. | *s-t(h)é | ἐστέ | sthá |
| 3. | *s-énti | εἰσί | sánti |

Indg. *és-mi regularly became εἰμί, Dor. ἤμί, Lesb. Thess. ἐμμί (§ 214), Skr. ásmi, Goth. im, Lith. esmì. εἶ from Indg. *ési = Skr. ási, Lat. es, Goth. is, beside Hom. ἐσ-σί = Indg. *és-si; Hom. εἷς with -s added after the analogy of forms like τίθης. ἐστί = Skr. ásti, Lat. est, Goth. ist, Indg. *és-ti. In Greek the ε- of the singular was levelled out into the dual and plural. On the personal

endings, see §§ 433-9. Att. ἐσμέν with -σ- from ἐστέ, the regular form occurs in Ion. εἰμέν, Dor. εἰμές. εἰσί = Dor. Boeot. ἐντί for *ἐντί (= Skr. *sánti*, Indg. **s-énti*) with ἐ- for é- after the analogy of other forms of the present; Hom. ἔ-ασσι from *ἔσαντι (§ 439).

Imperfect.

| | Indg. | Gr. | Skr. |
|----------|--------------|-------------|--------|
| Sing. 1. | *és-ṃ | ῆα, ῆ, ῆν | ásam |
| 2. | *és-s | ῆσθα | ás(i)h |
| 3. | *és-t | ῆν | ás(i)t |
| Dual 2. | *és-tom | ῆστον, ῆτον | ástam |
| 3. | *és-tām | ῆστην, ῆτην | ástām |
| Plur. 1. | *és-men, -mṃ | ῆμεν | ásma |
| 2. | *és-te | ῆστε, ῆτε | ásta |
| 3. | *és-ent | ῆσαν | ásan |

ῆ contracted from older (Hom.) ῆα = Indg. *és-ṃ. ῆν was a new formation with -ν from forms like ἐτίθην; ῆ, ῆα regularly fell together with the perfect = Indg. *és-a, Skr. ása (§ 517); and similarly ῆστον, ῆμεν, ῆστε. ῆσθα was the old perf. form used for the imperfect; the regular form would have been *ῆs = Vedic áh; the late form ῆs was a new formation. ῆν contracted from older (Hom.) ῆεν was originally the third pers. plural which came to be used for the singular, see below; the regular form was preserved in Dor. ῆs = Vedic áh, Indg. *és-t. ῆτον, ῆτην, ῆτε beside the regular forms ῆστον, ῆστην, ῆστε were new formations after the analogy of ῆμεν (§ 214), Dor. ῆμες with primary ending. ῆσαν was a new formation with ῆσ- from ῆστε and the -αν in forms like ἔλυσαν, ἔδειξαν (§ 439); after this form had come into existence the regular old plural ῆεν, ῆν (= Indg. *és-ent, Skr. ásan) came to be used for the singular. The long é of the singular was levelled out into the dual and plural already in the Indg. period.

| § 453. | Indg. | Gr. | Skr. |
|----------|-------------------|-------------|--------------|
| Sing. 1. | * <i>éi-mi</i> | <i>εἶμι</i> | <i>émi</i> |
| 2. | * <i>éi-si</i> | <i>εἶ</i> | <i>éši</i> |
| 3. | * <i>éi-ti</i> | <i>εἶσι</i> | <i>éti</i> |
| Dual 2. | * <i>i-t(h)és</i> | <i>ἴτον</i> | <i>itháh</i> |
| 3. | * <i>i-tés</i> | <i>ἴτον</i> | <i>itáh</i> |
| Plur. 1. | * <i>i-més</i> | <i>ἴμεν</i> | <i>imáh</i> |
| 2. | * <i>i-t(h)é</i> | <i>ἴτε</i> | <i>ithá</i> |
| 3. | * <i>j-énti</i> | <i>ἴασι</i> | <i>yánti</i> |

εἶ from older **εἶσι* = Skr. *éši*, Lat. *eis*, *is*, Indg. **éi-si*; Hom. *εἶσθα* with *-σθα* from *ἦσθα* (§ 452). *εἶσι* from *εἶτι* (§ 169) which was preserved in *ἕξειτι-ἕξελεύσεται* (Hesych.). *ἴασι* for **έντι* (= Skr. *yánti*, Indg. **j-énti*) was a new formation like *ἕασι* (§ 452).

Imperfect.

| | Indg. | Gr. | Skr. |
|----------|----------------------|---------------------|--------------|
| Sing. 1. | * <i>éj-m</i> | <i>ἦα, ἦειν</i> | <i>áyam</i> |
| 2. | * <i>éi-s</i> | <i>ἦεις, ἦεισθα</i> | <i>áih</i> |
| 3. | * <i>éi-t</i> | <i>ἦει(ν)</i> | <i>áit</i> |
| Dual 2. | * <i>éi-tom</i> | <i>ἦτον</i> | <i>áitam</i> |
| 3. | * <i>éi-tām</i> | <i>ἦτην</i> | <i>áitām</i> |
| Plur. 1. | * <i>éi-men, -mṇ</i> | <i>ἦμεν</i> | <i>áima</i> |
| 2. | * <i>éi-te</i> | <i>ἦτε</i> | <i>áita</i> |
| 3. | * <i>éj-ent</i> | <i>ἦσαν, ἦεσαν</i> | <i>áyan</i> |

The stem-form of the singular was levelled out into the dual and plural already in the Indg. period. Regular forms were *ἦτον, ἦτην, ἦμεν, ἦτε*. *ἦα* for **ῆα* (§ 128) with *ῆ* after the analogy of *ἦτον*, &c. *ἦει(ν)* and *ἦεσαν* were aorist forms, the former of which gave rise to the new formations *ἦειν, ἦεις, ἦεισθα*. The regular forms of the singular would have been **ῆα, ῆς, ῆ*. The Hom. forms *ῆει(ν), ῆόμεν* were formed after the analogy of the thematic verbs,

§ 454. Other examples of verbs belonging to Class I are
φημί, Dor. *φᾶμί* with shifted accent : *φαμέν*, *έφην* : *έφαμεν* ;
**έδων* : *έδομεν* = Skr. *á-dā-m* : **á-di-ma* ; **έθην* : *έθεμεν* =
 Skr. *á-dhā-m* : **á-dhi-ma* ; *έστην*, Dor. *έστᾶν* : **έσταμεν* =
 Skr. *á-sthā-m* : **á-sthi-ma*. In Sanskrit the long vowel of
 the singular was levelled out into the dual and plural,
 whence *ádāma*, *ádhāma*, *ásthāma*, and similarly *έστημεν*
 for **έσταμεν*. Middle *κεῖται* = Skr. *śētē*, *he lies down*,
ἵσται (with the rough breathing from *έδ*, *sit*) = Skr. *ástē*,
he sits, with *εῖ*, *ῆ* from the original active singular.

CLASS II.

REDUPLICATED MONOSYLLABIC ATHEMATIC HEAVY
 ABLAUT-BASES.

§ 455. The presents of this class were formed from the
 aorist of monosyllabic bases to which the original presents
 had been lost already in the Indg. period, as *τίθην-μι* :
**έ-θην-ν* = Skr. *dá-dhā-mi* : *á-dhā-m* ; *δί-δω-μι* : **έ-δω-ν* =
 Skr. *dá-dā-mi* : *á-dā-m*. On the difference between the
 Greek and the Sanskrit vowel in the reduplicated syllable,
 see § 429. The inflexion was the same as in Class I
 except in the third person plural.

| | Indg. | Gr. | Skr. |
|----------|-----------------------|------------------------|-----------------|
| Sing. 1. | <i>*dí-dhē-mi</i> | <i>τίθηνμι</i> | <i>dádhāmi</i> |
| 2. | <i>*dí-dhē-si</i> | <i>τίθης</i> | <i>dádhāsi</i> |
| 3. | <i>*dí-dhē-ti</i> | <i>τίθησι</i> | <i>dádhati</i> |
| Dual 2. | <i>*di-dhē-t(h)és</i> | <i>τίθετον</i> | <i>dhatthāḥ</i> |
| 3. | <i>*di-dhē-tés</i> | <i>τίθετον</i> | <i>dhattāḥ</i> |
| Plur. 1. | <i>*di-dhē-més</i> | <i>τίθεμεν</i> | <i>dadhmaḥ</i> |
| 2. | <i>*di-dhē-t(h)é</i> | <i>τίθετε</i> | <i>dhatthā</i> |
| 3. | <i>*dí-dh(ə)-ṇti</i> | <i>τιθέασι</i> (§ 439) | <i>dádhati</i> |

In Sanskrit the *-dh-* of the third person plural became
 generalized in the dual and plural, and conversely in Greek

the -θε- became extended to the third person plural. Like τίθημι : τίθεμεν, τίθεμαι are also inflected δίδωμι : δίδομεν, δίδομαι; ἵσταμι, Att. Ion. ἵστημι from *σί-σταμι : ἵσταμεν, ἵσταμαι. Imperfect ἐτίθην : ἐτίθεμεν; ἐτίθεις, ἐτίθει were formed after the analogy of the thematic verbs, and similarly ἐδίδουν, -ους, -ου, and the imperative τίθει, δίδου.

CLASS III.

DISSYLLABIC LIGHT BASES WITH OR WITHOUT REDUPLICATION.

a. Without Reduplication.

§ 456. The verbs of this class belong to the so-called thematic conjugation (§ 450). Two types are to be distinguished according as the first or the second vowel of the base originally had the accent, as *léiq(e)-, *liqé-, *leave*, cp. λείπω : λιπεῖν, φεύγω : φυγεῖν, τρέπω : τραπέειν, ἔπομαι from *σέπομαι : ἐσπόμην. The type *léiq(e)- with regular loss of the final e (§ 450) was originally inflected like a verb of Class I, as *léiq-mi, pl. *liq-més = *λείπμι, *λιπμέν. But already in the parent Indg. language nearly all the verbs of this type passed over into the thematic conjugation, as ἔρπω, λέγω, φέρω, δέркоμαι, τρέφω, πείθω, ἔρείκω, ἐρείπω, στείχω, κεύθω, πεύθομαι, ἐρεύγομαι, τεύχω, θήγω, &c., cp. Skr. bhárati beside bhárti, *he bears*, férete beside férete, Lat. fero, volo beside fert, vult. The type *liqé—with preservation of the original accent in the infinitive λιπεῖν—was chiefly aorist in function, as ἔλιπον, ἔτραφον, ἔδρακον (Skr. ádṛśam), ἤριπον, ἤρικον, ἐπιθον, ἔστιχον, ἔκυθον, ἤρυγον, ἔτυχον, ἔφυγον, &c. (§ 505). How this difference in function between the two types originally came about is unknown (cp. § 426). Side by side with the type *liqé- with the function of an aorist, there exists in all the Indg. languages a certain number of presents the

stem-syllable of which is aorist in form, as γλύφω, τῦφω, γράφω, γλάφω, Dor. τράπω, τράφω; Skr. dáśati = Indg. *dñkétī, *he bites*, jīvati, *he lives*; Goth. trudan, *to tread*; OE. cuman, *to come*, &c. Such presents are usually called aorist-presents in contradistinction to presents like λείπω, φέρω which are called imperfect-presents. The inflexion of φέρω will serve as a model for all presents of this class. On the endings in the Greek forms see the paragraphs dealing with the personal endings.

| | Indg. | Gr. | Skr. | Goth. |
|----------|---------------|------------------------|-----------|---------|
| Sing. 1. | *bhérō | φέρω | bhārāmi | baíra |
| 2. | *bhére-si | φέρεις | bhārasi | baíris |
| 3. | *bhére-ti | φέρει | bhārati | baírīþ |
| Dual 2. | *bhére-t(h)es | φέρετον | bhārathaþ | |
| 3. | *bhére-tes | φέρετον | bhārataþ | |
| Plur. 1. | *bhéro-mes | φέρομεν, Dor. -μες | bhārāmaþ | baíram |
| 2. | *bhére-t(h)e | φέρετε | bhāratha | baírīþ |
| 3. | *bhéro-nti | φέρουσι, Dor. -οντι | bhāranti | baírand |

Imperfect.

| | Indg. | Gr. | Skr. |
|----------|-------------------|----------|-----------|
| Sing. 1. | *é-bhero-m | ἔφερον | ábhamam |
| 2. | *é-bhere-s | ἔφeres | ábharah |
| 3. | *é-bhere-t | ἔφερε | ábharat |
| Dual 2. | *é-bhere-tom | ἔφέρετον | ábharatam |
| 3. | *é-bhere-tām | ἔφéréτην | ábharatām |
| Plur. 1. | *é-bhero-men, -mñ | ἔφέρομεν | ábharāma |
| 2. | *é-bhere-te | ἔφέρετε | ábharata |
| 3. | *é-bhero-nt | ἔφερον | ábharan |

In like manner is also inflected the second or strong aorist, ἔλιπον, &c. (§§ 503, 505).

b. With Reduplication.

§ 457. In the reduplicated verbs belonging to this class three sub-divisions are to be distinguished according as the reduplicated syllable contains *i*, *ε* or a fuller reduplication (§ 429).

1. Verbs with *i* in the reduplicated syllable have weak grade stems of the type *liqé-, as γί-γνο-μαι, cp. Lat. gi-gno; μί-μνω : μένω, ἴσχω from *σι-σχω : ἴχω from *σεχω, πτί-πτω with *i* after the analogy of ρί-πτω : πέτο-μαι, νί-σομαι from *νι-νσο-μαι : νέομαι from *νεσο-μαι, τί-κτω from *τι-τκω : ἔ-τεκον, ἴζω from *σι-σδω : ἔδος from *σεδος; cp. Skr. tí-ṣṭha-ti, *he stands*, Lat. sistit.

2. Verbs with *ε* in the reduplicated syllable, preserved only in aorists like ἔ-πε-φνο-ν, inf. πε-φνέ-μεν : base *ghén(e)-, ghné-; ἔ-σπε-το, inf. ἐ-σπέ-σθαι, cp. Skr. sá-ṣca-ti, Indg. *se-sqe-ti, *he follows* : Lat. sequi-tur; ἐ-κέ-κλε-το : κέλο-μαι, τε-τάρπε-το : τέρπω, ἔ(f)ειπον, εἶπον, Indg. *e-we-wqo-m.

3. Verbs with fuller reduplication, preserved only in aorists like ἤγ-αγο-ν, inf. ἀγ-αγεῖν : ἄγω; ἦρ-αρο-ν, inf. ἄρ-αρεῖν; ἦν-εγκο-ν, inf. ἐν-εγκεῖν; ὤρ-ορο-ν : pres. ὄρ-νῦ-μι.

CLASS IV.

DISSYLLABIC ATHEMATIC HEAVY ABLAUT-BASES WITH
OR WITHOUT REDUPLICATION.

a. Without Reduplication.

§ 458. In the dissyllabic heavy ablaut-bases the first syllable contained a short vowel or diphthong and the second a long vowel or a long diphthong, as *petā-, *genō- (*genē-), *menēi-. According as the accent was originally on the first or second syllable we get the two types *pétā- (πέτα-μαι), *génō-, *ménī- (where *i* is a contraction of *ei* (§ 88) and *i* is the weakest grade of ablaut), and *ptā-

(πτῆ-ναι, Dor. ἔ-πτᾱ-ν), *gnō- (ἔ-γνω-ν and *gnē- in OE. *cnā-wan*, *to know*), *mḡ-ē(i) (ἐ-μάνη-ν).

Only middle forms of verbs of the type *pētā- were preserved in Greek, all the active forms passed over into the thematic conjugation in the prehistoric period of the language and similarly in all the other languages except the Aryan branch, as πέτα-μαι, ἄγα-μαι, ἔρα-μαι beside the new thematic formations, πέτο-μαι, ἀγᾶο-μαι, ἐράο-μαι (Att. ἐράω), κρέμα-μαι. But on the other hand Lat. *vomo*, ἐμέω for *φεμα-μι or *φεμε-μι = Skr. *vāmi-mi*, cp. ἔμε-σσα, ἤμε-σα; δαμάω for *δαμα-μι, and similarly ἐλάω, γελάω, ἀρόω, &c., cp. Skr. *āni-mi*, *I breathe*; *svāpi-mi*, *I sleep*; *rōdi-mi*, *I weep*.

The long vowel in the type *ptā-, *gnō- belonged in the parent Indg. language to all numbers of the active and middle. The forms of this type often had the function of an aorist, as Hom. πλῆ-το : Skr. ā-prā-t, *he filled*, base *plē- beside *pélā-; πτῆ-ναι, ἔ-πτῆ-ν : πέτα-μαι; ἔ-δρα-ν beside Skr. drā-ti, *he runs*; ἔ-γνω-ν : Skr. jñā-tāḥ, Lat. (g)nō-tus, *known*; and similarly ἔβλην, ἔσβην, ἔτλην Dor. ἔτλᾱν, ἔβην Dor. ἔβᾱν = Skr. āgām, Att. ἐγῆρᾱν : γηράσσω; Hom. πλῆτο : πελάζω, cp. Dor. ἄ-πλᾱτος. The -ē- formations with intransitive meaning became productive in Greek in the shape of the so-called passive aorist, which was originally active both in form and meaning (§§ 503, 506). Examples of -ē- in other than aorist forms are: ἄη-σι = Skr. vā-ti, *he blows*; Lat. im-plē-s, Skr. prā-si, *thou fillest*.

Beside the type *petā-, &c. with long vowel in the second syllable there also existed the type *menēi- with long diphthong. These two types began to be mixed up already in the parent language owing to the frequent loss of the second element of long diphthongs (§ 63). It is often therefore no longer possible to keep the two types rigidly apart. When the Indg. accent was on the first syllable,

the long diphthong became weakened to *-ai-* which regularly became *-ī-* (§ 88) and in its weakest form *-i-*, cp. Skr. *ámī-ti*, *he injures*; *brāvī-ti*, *he says*, and forms like Lat. *farcis* beside *cupis*. The presents of this type partly went over into the thematic conjugation already in the parent Indg. language and became mixed up with the *jo*-verbs (§ 481), as *μαίνομαι*, *φαίνομαι*, *χαίρω*, *τύπτω*, Hom. *ρήσσω*, from **μανjöμαι*, **φανjöμαι*, **χαρjö*, **τυπjö*, **ρήκjö*; *ἔζομαι* from **σεδjöμαι* : Lat. *sedē-re*; *ῥέω* from **δδjö* : *ῥή-σω* for **δδη-σω*. The *-i-* also occurs in characterized presents like *εὐρί-σκω* : *εὐρή-σω*, *στερί-σκω* : *στερή-σω*, *ἀλί-σκομαι* : *ἀλῶ-ναι*. When the Indg. accent was on the second syllable, the long vowel—originally long diphthong—remained, whence *ἐμάνην* beside *μαίνομαι*, and similarly *ἐφάνην*, *ἐχάρην*, *ἐτύπην*, *ἐρράγην*, &c. (§ 506), which as we have seen above became productive in Greek and eventually came to be passive aorist in meaning.

b. With Reduplication.

§ 459. *βί-βη-σι*, Skr. *jí-gā-ti*, *he goes*; *δί-ξη-μαι* from **δι-δḡ-μαι* beside *δί-ξο-μαι* from **δι-δjö-μαι*; *ἴλη-μι* from **σι-σλη-μι* beside *ἴλα-μαι* from **σι-σλα-μαι*; *κί-χρη-μι* : *κί-χρα-μαι*. Presents like *πίμ-πλη-μι*, *πίμ-πρη-μι* had the nasal in the reduplicated syllable after the analogy of verbs of the type *λιμπάνω* (§ 467), and forms like *πίμπλᾶμεν* : *πίμπλημι* were new formations after the analogy of *ἴσταν* (§ 455).

CLASSES V-VIII.

§ 460. There can hardly be any reasonable doubt that the general principle underlying the formation of the various classes of nasal-presents was originally identical in all the classes, cp. (1) Skr. *aśná-mi*, *I eat*; *aśnī-máh*, *we eat*; *aśn-ánti*, *they eat*; Gr. *δάμνη-μι*, *δάμνα-μεν* = Indg. **dmnā-mi*, **dmnə-més*. (2) Skr. *strñō-mi*, *strñu-máh* =

Gr. *στόρνῦ-μι, στόρνῦ-μεν*, Indg. **stṛnéu-mi*, **stṛnu-més*. (3) Skr. *yunáj-mi*, *I yoke*; pl. *yuñj-máh*, *we yoke*, Indg. **junég-mi*, **jung-més*; Skr. *chinád-mi*, *I destroy*; pl. *chind-máh* : Lat. *scindo*, Gr. *σχίζω* from **σχιδῶ*. (4) Skr. *vindá-ti*, *he finds*; Skr. *yuñjá-ti*, *lumpá-ti* = Lat. *jungit*, *rumpit*, cp. also Engl. *stand* : *stood*. Besides having the characteristic feature of nasal-infix it should be noted that the root-syllable of all these types of verbs had originally the weak grade of ablaut. In verbs of the type *δάμνη-μι, στόρνῦ-μι* the nasal was infixed before the last element of the dissyllabic base, Indg. **dm̥-á*, **stṛ-éu*. The *-ná*, *-nə*, and *-néu*, *-nu* came to be regarded as suffixes already in the parent language, and then became extended by analogy to root-forms to which they did not originally belong. In verbs of the type Skr. *yunáj-mi*, *-ne*, the strong grade form of *-n*, was infixed before the final consonant of the root-syllable. This type of present was only preserved in the Aryan group of languages. The types (1), (2), and (3) were inflected according to the athematic conjugation with the accent in the singular on the second syllable of the base which had full grade vowel, and in the dual and plural on the ending, as **dm̥ná-mi*, **stṛnéu-mi*, **junég-mi*, pl. **dm̥nə-més*, **stṛnu-més*, **jung-més*. In verbs of the type Skr. *yuñjá-ti*, *lumpá-ti* = Lat. *jungit*, *rumpit*, Indg. **jungé-ti*, **rumpé-ti* the nasal was infixed before the final consonant of the root-syllable. The verbs of this type belonged to the thematic conjugation.

In the present state of our knowledge of the parent Indg. language it is impossible to determine what was the original function and meaning of the nasal-infix. It is also unknown how it came about that the nasal became infixed, because the infixing of formative elements is otherwise unknown in the Indg. languages.

CLASS V.

§ 461. To this class belong verbs of the type δάμνημι : δαμά-σαι, ἐ-δάμα-σα ; πίτνημι : πετά-σαι, ἐ-πέτα-σα ; Skr. aśnāmi, *I eat* ; kṛiṇāmi, *I buy* ; μάρναμαι : μαρα-σμός, cp. Skr. mṛṇāmi, *I crush, destroy*. Sanskrit has -nī- for -ni- in the dual and plural after the analogy of verbs of Class IV (§ 458).

| | Indg. | Gr. | Skr. |
|----------|------------|------------------|-----------|
| Sing. 1. | -nā·mi | δάμνημι | kṛiṇāmi |
| 2. | -nā·si | δάμνης | kṛiṇāsi |
| 3. | -nā·ti | δάμνησι | kṛiṇāti |
| Dual 2. | -nə·t(h)és | δάμνατον | kṛiṇitháh |
| 3. | -nə·tés | δάμνατον | kṛiṇitáh |
| Plur. 1. | -nə·més | δάμναμεν | kṛiṇimáh |
| 2. | -nə·t(h)é | δάμνατε | kṛiṇithá |
| 3. | -n(ə)·énti | δάμνασσι (§ 439) | kṛiṇánti |

And similarly Att. πέρνημι with -ε- after the analogy of περάω, ἐ-πέρα-σα. The -ι- in the root-syllable of the following verbs has never been satisfactorily explained :— κίρνημι : κεράω, ἐ-κέρα-σα ; κρίμνημι : ἐκρέμα-σα ; πίτνημι : ἐ-πέτα-σα ; *ὀρίγναμαι : ὀρέγω ; πίλναμαι : ἐ-πέλα-σα ; σκίδναμαι : ἐ-σκέδα-σα (cp. § 44, note 1). In δύναμαι the -να- was levelled out into all forms of the verb.

§ 462. Most of the verbs which originally belonged to Class V went over into the thematic conjugation with preservation or loss of the -α- in -να-, as δαμνάω, κιννάω, ὀριγνάομαι, πιλνάω, πιτνάω beside δάκνω, κάμνω : κάματος, πίνω, Hom. Dor. τάμνω, πίνω. It is difficult to account for the strong grade vowel in the root-syllable of Att. τέμνω, Dor. δήλομαι from *δελνομαι beside Att. βούλομαι from *βολνομαι, Lesb. ἀπ-έλλω, Hom. εἶλομαι from *φελνομαι. Some verbs went over into the jo-conjugation (§ 478), as Lesb. κλίννω, Hom. Att. κλίνω from

*κλινῶ : Lat. in-clī-nā-re ; κρίνω from *κρινῶ : Lat. cerno from *crinō ; ὀτρύνω from *ὀτρυνῶ. This change from the athematic to the thematic conjugation probably began already in the parent Indg. language, cp. Skr. gr̥nā-ti, *he calls*, minā-ti, *he lessens*, mr̥nā-ti, *he destroys*, beside gr̥nā-ti, minā-ti, mr̥nā-ti ; Goth. and-bundnis, *thou becomest unbound*, beside Skr. badhnā-si, Indg. *bh̥ndhnā-si, *thou bindest* ; Lat. sternit beside Skr. s̥tr̥nā-ti, *he strews*.

CLASS VI.

§ 463. To this class belong verbs of the type στόρνυμι, Skr. s̥tr̥nōmi, *I strew* ; Goth. stráujan, *to strew* ; ὀρνυμι, Skr. ṛnōmi, *I move* ; Hom. τάννυται = Skr. tanu-té : Skr. tanōmi, Indg. *t̥n̥-nō-mi, *I stretch*. In Greek the singular had -νῦ- for -νευ- : -νυ- after the analogy of -νᾶ-, Att. Ion. -νῆ- : -να- in Class V.

| | Indg. | Gr. | Skr. |
|----------|-----------------|-------------------|-------------|
| Sing. 1. | *s̥tr̥-néu-mi | στόρνυμι | s̥tr̥nōmi |
| 2. | *s̥tr̥-néu-si | στόρνυς | s̥tr̥nōši |
| 3. | *s̥tr̥-néu-ti | στόρνυσι | s̥tr̥nōti |
| Dual 2. | *s̥tr̥-nu-t(h)é | στόρνυτον | s̥tr̥nutháh |
| 3. | *s̥tr̥-nu-tés | στόρνυτον | s̥tr̥nutháh |
| Plur. 1. | *s̥tr̥-nu-més | στόρνυμεν | s̥tr̥numáh |
| 2. | *s̥tr̥-nu-t(h)é | στόρνυτε | s̥tr̥nuthá |
| 3. | *s̥tr̥-nw-énti | στορνύσσι (§ 439) | s̥tr̥nvánti |

And similarly Hom. ἀνῦμι, ἤνυτο : Skr. sanōmi, *I gain, acquire* ; ἀρνυμαι, ἄχνυμαι, κίνυμαι, πτάρνυμαι : Lat. sternuo.

This type of present became productive in Greek which gave rise to numerous new formations. The -νῦμι came to be used—irrespective whether the root-syllable had the weak or strong grade of ablaut—to form the present of bases ending in a guttural, when such bases had an s-aorist, as δεικνῦμι : ἐδειξα, and similarly ζεύγνυμι, μείγνυμι (μίγνυμι),

δόμωργνῦμι, ὀρέγνῦμι, πηγνῦμι, πλήγνῦμι, ῥήγνῦμι, φράγνῦμι. Other examples of new formations were: δαίνῦμι : ἔδαισα, Ion. εἴνῦμι, Att. ἐννῦμι from *φεσνῦμι : ἔσ-σα, ὀλλῦμι from *ὀλνῦμι : ὤλεσα, ὀμνῦμι : ὤμοσα, τείνῦμι : ἔτεισα ; ὀρνῦμι for *ἀρνῦμι, στόρνῦμι for *στρα- or *σταρ-νῦμι.

§ 464. The regular form εἴνῦμι from prim. Gr. *φεσνῦμι (§ 214) was preserved in Ionic, but in the prehistoric period of Attic a new present *φεσνῦμι was formed with -σ- from forms like ἔσ-σα, ἐσ-θῆναι. This -σν- became assimilated to -νν- (§ 214), whence ἐννῦμι, and similarly σβέννῦμι, ζώννῦμι. And then after the analogy of these verbs were formed presents like κορέννῦμι : ἐκόρεσα, στορέννῦμι, ῥώννῦμι, στρώννῦμι, κεράννῦμι, κρεμάννῦμι, πετάννῦμι, σκεδάννῦμι.

§ 465. A large number of the verbs which originally belonged to Class VI went over into the thematic conjugation partly in the historic and partly in the prehistoric period of the language. The presents in -νύω are common in Att. Ion. and Doric, as ἀνύω, δεικνύω, μιγνύω, ὀμνύω, ὀρνύω, τανύω, κεραννύω, στρωννύω. These presents mostly came into existence in the historic period of these dialects. But many verbs passed over into the thematic conjugation in the prehistoric period of the language, as Hom. ἄνομαι, Att. ἄνομαι from *ἀνφομαι : Skr. sanómi, *I gain, acquire* ; θύνω : Skr. dhūnómi, *I shake* ; Hom. ἰκάνω, κιχάνω from *ἰκανφω, *κιχανφω ; Hom. τίνω, Att. τίνω from *τινφω : Skr. cinómi, *I collect* ; Hom. φθάνω, φθίνω, Att. φθάνω, φθίνω from *φθανφω, *φθινφω. In the verbs θυνέ(φ)ω (Hesiod), ἰκνέ(φ)ομαι, κινέ(φ)ω : κίννυμαι, οἰχνέ(φ)ω the change from the one conjugation to the other probably took place at the time when the singular still had *-νευμι, *-νευσ, *-νευτι for later -νῦμι, -νῦς, -νῦσι. This explains the -ε- which it would be difficult to account for otherwise. As in the verbs of Class V the change from the athematic to the thematic conjugation probably began already in the parent Indg.

language, cp. Skr. *cinvá-ti* beside *cinó-ti*, *he collects*; *ῥηνά-ti* beside *ῥηό-ti*, *he moves*; *miná-ti* beside *minó-ti*, *he lessens*. In Latin and the Germanic languages all the verbs originally belonging to this class went over into the thematic conjugation.

CLASS VII.

§ 466. To this class belong the verbs which have a nasal infix before the final consonant of the root-syllable (§ 460). This type of verbs was well preserved in Sanskrit and Latin, cp. Skr. *vindáti*, *he finds*; *yuñjáti*, *lumpáti* = Lat. *jungit*, *rumpit*; *kṛntáti*, *he cuts*; *límpáti*, *he smears*; Lat. *findo*, *fundo*, *linquo*, *pango*, *scindo*, *tango*, *vinco*, &c. But in Greek the original formation was only preserved in *ρέμβομαι*, *σφίγγω*, and possibly in *ἀτέμβω*, *στέμβω*. All the other verbs originally belonging to this class went over either into Class VIII or into the jo-conjugation (§ 478), cp. *λιμπάνω* : **λιμπω*, Lat. *linquo*; *πυνθάνομαι* : **πυνθω*, *πέυθομαι*; *κλαγγάνω* : **κλαγγω*, Lat. *clango*, beside *κλάζω* from **κλαγγῆ*; *πλάζω* from **πλαγγῆ* : **πλαγγω*, Lat. *plango* (§ 156); *πίττω*, *πίττω* from **πτισσω* : Lat. *pīnsio*, *pīnso*; *λύζω* from **λυγγῆ*. The type of present like *ἀνδάνω* : *ἀδεῖν*, *λαγχάνω* : *ἐλαχον*, *λανθάνω* : *ἐλαθον*, *τυγχάνω* : *ἐτυχον*, *χανδάνω* : *ἐχαδον*, all of which occur in Homer, became productive in the post-Homeric period. After the analogy of these verbs were formed many new presents to strong aorists, as *δαγκάνω* : *ἔδακον*, *ἐρυγγάνω* : *ἔρυγεῖν*, and similarly *θιγγάνω*, *λαμβάνω*, *μανθάνω*, *πανθάνω*, *φυγγάνω*. After the analogy of *λιμπάνω* were also formed *πιμπλάνω*, *πιμπράνω*.

CLASS VIII.

§ 467. To this class belong the verbs in *-άνω*. The original type was probably denominative verbs like *θηγάνω* : *θηγάνη*, *θήγανον* (Hesych.); *ὀλισθάνω* : *ὀλίσθανος*, as similarly formed denominative presents are also found

in Sanskrit, Armenian, and Lithuanian. The suffix *-ανω* then became productive in the formation of new presents, partly to forms which were already present, and partly to forms with the function of aorist, as *αἰσθάνομαι* : *αἰσθω*, *ἀλυσκάνω* : *ἀλύσκω*, *ἀπ-εχθάνομαι* : *ἔχθομαι*, *αὐξάνω* : *αὔξω*, *ἀμβλισκάνω* : *ἀμβλίσκω*, *ἐρῡκάνω* : *ἐρύκω*, *ἰζάνω* : *ἰζω*, *ἰστάνω* : *ἴστημι*, *ἰσχάνω* : *ἴσχω*, *κευθάνω* : *κεύθω*, *ληθάνω* : *λήθω*; *ἀλφάνω*, *κῡδάνω*; *ἁμαρτάνω* : *ἡμαρτον*, *βλαστάνω* : *ἔβλαστον*, *δαρθάνω* : *ἔδαρθον*. It can hardly be an accident that in all verbs of this class the root-syllable is long either by vowel quantity or by position. After the analogy of verbs like *ληθάνω* : *λήθω*, *ισχάνω* : *ἴσχω* were formed *λιμπάνω* : **λιμπω*, *κλαγγάνω* : **κλαγγω*, and then *-άνω* became extended to nearly all the verbs of Class VII (§ 466).

NOTE.—In a few verbs beside *-άνω* there are also forms in *-ανάω* (with *-άω* after the analogy of denominative verbs like *τιμάω*, *δαπανάω* : *δαπάνη*), and in *-αίνω* from *-ανῆω*, as *ἐρύκανάω*, *ισχανάω* beside *ἐρύκάνω*, *ισχάνω*; *κῡδαίνω*, *οἰδαίνω*, *ὀλισθαίνω* beside *κῡδάνω*, *οἰδάνω*, *ὀλισθάνω*. See § 478.

CLASS IX.

§ 468. To this class belong the original *s*-presents. The presents of this type were not numerous in the parent Indg. language nor did they become productive in the separate languages. The *-s-* was of the same origin as the *-s-* which occurred in the aorist (§ 507) and in the future (§ 499), and possibly also in the *sko*-presents (§ 469), and was doubtlessly closely connected with the *-s* in the *s*-stems of nouns, but it is unknown what was the original function or meaning of the *-s-*.

This class originally contained both athematic and thematic presents. The athematic forms except in the aorist were not preserved in Greek, but were well pre-

served in Sanskrit where however the *-s-* was levelled out into all forms of the verb, as *dvé-ṣ-mi*, *I hate*, pl. *dvi-ṣ-máh*, *we hate*, *dvi-ṣ-táh*, *hated* : Gr. **δφει*, **δφι*, *fear*. Of the thematic presents several were preserved in Greek, as Skr. *rák-ṣ-a-ti*, *he rescues*, pl. *rák-ṣ-a-nti*, *they rescue*, Gr. *ἀλέξω* : *ἀλ-αλκ-εῖν*, *ἀλκ-ή* ; Skr. *úk-ṣ-a-ti*, *he grows*, Gr. *αὔξω* : Skr. *ōj-as*, *strength*, Lat. *augēre* ; Skr. *trá-s-a-ti*, *he trembles*, Gr. *τρέω* from **τρεσω* : *τρέμω*, Lat. *tre-mo* ; *ἀ(φ)έξω*, *δέψω* beside *δέφω*, *ἔψω*, *κλάω* cp. *κέκλασ-ται*, *ὀδάξω* : *δάκ-νω*, *ξέω* cp. *ξέσ-σαι*, *σείω* cp. *σέ-σεισ-ται*, *σπάω* cp. *ἔσπασ-ται*. It should be noted that no sharp line of distinction can be drawn between primary s-verbs and denominative verbs formed from s-stems, cp. *τελέω* from **τελεσῶ*, *γελάω* from **γελασῶ* (§ 492) : *τελέσ-σαι*, *γελάσ-σαι*, beside *κλάω* from **κλασω* : *κέκλασ-ται*.

CLASS X.

§ 469. To this class belong the verbs the present of which was originally formed by the addition of the formative suffix *-sko-* to the weak grade form of the base which could be either monosyllabic or dissyllabic. The presents of this type were rare in Sanskrit and the Germanic languages, but became productive in Greek and Latin. They appear in Greek both with and without reduplication, the former do not appear in Sanskrit, and Latin has only the one example *disco* from **di-dc-sco*. The accent was originally on the suffix in all forms of the present, as sing. *-skō*, *-ské-si*, *-ské-ti*, pl. *-skó-mes*, *-ské-t(h)e*, *-skó-nti*. It is doubtful whether the suffix in the Ionic imperfect and aorist iterative forms like *φάσκε*, *φεύγεσκεν*, *φιλέσκε*, *δόσκον*, *φύγεσκε*, &c. is of the same origin, because the meaning of the suffix and the absence of the augment (§ 430) in such forms have never been satisfactorily explained.

a. Without Reduplication.

§ 470. 1. Monosyllabic heavy bases, as *φάσκω* : *φημί* (§ 454), *βόσκω* : *βότωρ*.

2. Dissyllabic light bases, as *βάσκω*, *βάσκει*, Skr. *gácchā-mi*, *I go*, *gáccha-ti*, *he goes*, Indg. **gṃskō*, **gṃské-ti* : *βαίνω* from **βαμῶ* (§ 142), Indg. **gṃjō*, beside Goth. *qimip*, *he comes*, Indg. **géme-ti* ; Skr. *prcchá-ti*, Lat. *poscit* from **porc-scit*, Indg. **prk-ské-ti*, *he asks* ; *ῥσκω* from **ῥικ-σκω* (§ 186) : *ἔ-οικα*, *λάσκω* from **λακ-σκω* : *ἔλακον*, *μίσγω* from **μικ-σκω*, with -*γ-* for -*κ-* after the analogy of *μίνυνμι*, *ἐμίνυνν*, cp. Lat. *misceo* ; *πάσχω* from **παθσκω* : *ἔπαθον* (§ 109).

3. Dissyllabic heavy bases, as *ἀρέσκω* : *ἤρεσα*, *γηράσκω* : *γηράω*, *θνήσκω* (Dor. *θνάσκω*), *βλώσκω*, *θρώσκω*. In presents like *εὔρίσκω* : *εὔρήσω*, *στέρισκω* : *στερήσομαι*, *άλίσκομαι* : *ἄλῶναι*, *ἀμβλίσκω* : *ἤμβλωσα*, the -*i-* was the weak grade form of an original long diphthong *-ēi-*, *-ōi-* (§ 458). After the analogy of such presents were formed Att. *θνήσκω*, *μι-μνήσκω* (§ 471), *θρόσκω*, Ion. *κληῖσκω*, *χρηῖσκομαι*.

b. With Reduplication.

§ 471. In the reduplicated verbs belonging to this class three sub-divisions are to be distinguished according as the reduplicated syllable contains -*i-*, -*ε-*, or a fuller reduplication.

1. *βιβρώσκω*, *γινώσκω* : Lat. (g)nōsco, *διδάσκω* from **δι-δακ-σκω* : Lat. *disco*, *διδράσκω*, *ἰλάσκομαι* from **σι-σλα-σκομαι* : *ἱλαθι* from **σι-σλα-θι* ; *κικλήσκω*, *μιμνήσκω* beside *κικλήσκω*, *μιμνήσκω* (§ 470, 3), *πιπράσκω*, *τιτύσκομαι*, *πιπῖσκω*.

2. *δεδίσκομαι*, *έίσκω* from **φε-φικ-σκω* beside *ῥσκω* : *ἔ-οικα*.

3. *ἀραρίσκω*, *ἀπαφίσκω*.

CLASS XI.

§ 472. To this class belong the verbs the present of which contains a dental suffix -*to-*, -*do-*, or -*dho-*. The presents of this type were rare in the parent Indg. language and

remained unproductive in the various individual languages with the exception of the *-dho-* presents in Greek. In Sanskrit, Latin and the Germanic languages the dental was generally levelled out into all forms of the verb, and occasionally also in Greek. It is sometimes difficult to determine how far the dental can be regarded as a formative verbal suffix and how far it is merely a so-called root-determinative. The *-to-* presents are rare in all the Indg. languages. In these presents the *-to-* was closely connected with the nominal suffix *-to-*, cp. Lat. *plecto*, *πλεκτός*: *πλέκω*, *πέκτω*: *πекτός*, *ἐβλαστον*: *βλαστός*. It is doubtful what was the origin and original function of the dental in the *-do-* and *-dho-* presents. Some scholars regard it as being connected with the *-d-*, *-dh-* of the roots **dō-* in *δί-δω-μι*, and **dhē-* in *τί-θη-μι*.

***-to-* presents.**

§ 473. Att. *ἀνύτω*: *ἀνύω*, *ἀνῦμι*; Att. *ἀρύτω*: *ἀρύω*; *πέκτω*, Lat. *pecto*, cp. OE. *feohtan*, *to fight*: *πέκω*; Lat. *plecto*: *πλέκω*. In forms like *ἐβλαστον*: *βλαστάνω*, *ἡμαρτον*: *ἁμαρτάνω* the dental is not a present suffix but belongs to all forms of the verb. *τίκτω* is from older **τιτκω* (§ 457). All or nearly all the other *-to-* presents in Greek are of a different origin, as in *ἀστράπτω* from **ἀστραπῆω* (§ 129, 1): *ἀστραπή*; and similarly *δάπτω*: *δαπάνη*, *κλέπτω*: Lat. *clepo*, Goth. *hlifa*, *I steal*; *χαλέπτω*: *χαλεπός*; *κόπτω*, *σκάπτω*, *τύπτω*, and many others. These and similar presents, where the *-πτ-* was regularly developed from older *-πῑ-* (§ 129, 1), gave rise to numerous new formations. After the analogy of the future and aorist in verbs like *τύψω*, *ἔτυψα*: *τύπτω* from **τυπῆω*, new presents in *-πτ-* were formed to stems ending in *-β* and *-φ*, as *καλύπτω*: *καλύψω*, *ἐκάλυψα*, cp. *καλύβη*; *βάπτω*: *βάψω*, *ἐβαψα*, cp. *ἐβάφην*; and similarly *ἄπτω*, *βλάπτω*, *δρύπτω*, *ἐρέπτω*, cp. *ἐρέφω*, *θάπτω*, *κρύπτω*, *κύπτω*, &c. And in like manner were

formed new presents to stems originally ending in a velar guttural (§§ 202, 205), as πέπτω : πέψω, ἔπειφα, beside the regular form πέσσω, Att. πέττω from Indg. *peqjō, cp. Lat. coquo, Skr. pácāmi, *I cook*; νίπτω : νίψω, ἔνιψα, beside the regular form νίζω from Indg. *niqjō.

-do-presents.

§ 474. ἄλδομαι, ἀλδαίνω : ἄν-αλ-τος, Lat. alo; ἔλδομαι from *felldομαι : Lat. vel-le; μέλδομαι : μαλακός.

-dho-presents.

§ 475. ἀλήθω : ἀλέω, ἄλθομαι, ἀλθαίνω : ἄν-αλ-τος, Lat. alo; ἀλκαθεῖν : ἄλκω, ἄλχομαι : ἄχυνται, βαρύθω : βαρύς, βρίθω : βρι-αρός, γήθομαι, Dor. γάθομαι from *γα̑φαθομαι : γαίω from *γα̑fjō, cp. Lat. gaudeo from *gāvideō; ἐμέθω : ἐμέω, ἔσθω, ἐσθίω : ἔδω, Lat. edo; aor. ἔσχεθον : ἔσχον, θαλέθω : θάλλω, κνήθω : κνάω, πελάθω : πέλας, πλήθω : πίμπλημι, πύθω : Skr. pūyati, *he stinks*, πύον; φλεγέθω : φλέγω, μινύθω : Skr. mi-nō-mi, *I lessen*, Lat. minuo; φθινύθω : Skr. kṣi-nō-mi, *I destroy*.

CLASS XII.

§ 476. To this class belong the various types of j-presents which from the point of view of Greek can be conveniently divided into the so-called primary verbs, the denominative verbs, and the causative together with the iterative verbs. In the so-called primary verbs two originally distinct types of presents fell together in Greek, viz. the thematic jo-presents and the athematic ĵ-presents (§ 481). Before reading the account of the history of the j-presents in Greek, the student should consult §§ 127-30, because what is stated there about j will not be repeated in the following paragraphs.

I. PRIMARY VERBS.

a. Thematic Presents.

§ 477. The thematic presents were formed by adding *-jo-*, *-je-* direct to the root-syllable which could have either the strong or the weak grade of ablaut, as *λεύσσω* from **λευκῆω*; *πέσσω* = Indg. **péqjō*: Skr. *pácyatē* = Indg. **péqjetai*, *he cooks*; Skr. *páśyati*, *he sees*: Lat. *specio*; beside *βαίνω* from **βαῖνω*, Lat. *venio* (§ 142), Indg. **gm̥jō*; *σχίζω* from **σχιδῆω*: Goth. *skáidan*, *to divide*. The original inflexion of the present was: sing. *-jō*, *-je-si*, *-je-ti*, pl. *-jo-mes*, *-je-t(h)e*, *-jo-nti*, and the thematic vowel had or had not the accent according as the root-syllable contained the weak or the strong grade of ablaut, as **gm̥jéti*, *he goes*, beside **péqjeti*, *he cooks*. But the accent in presents of the type **gm̥jéti* probably became shifted on to the root-syllable already in the prim. Indg. period, cp. Skr. *kúpjati*, *he is angry*, Lat. *cupio*; *dívyati*, *he plays*; *hṛṣyati*, *he rejoices*, beside *páśyati*, *he sees*. The oldest stratum of both types was the denominative presents formed from monosyllabic root-nouns. A distinction in the accent between them and the ordinary denominatives thus arose inasmuch as all presents of the former type came to have the accent on the root-syllable, whereas the latter type had it on the thematic vowel *-jō-*, *-jé-*. Greek, Sanskrit, and the Baltic-Slavonic languages regularly preserved the primary *-jo-*presents, but in Latin and the Germanic languages they became mixed up with the originally athematic *ī-*presents (§ 481).

§ 478. The root-syllable of the primary *jo-*presents could end in a vowel or in a consonant, as *δράω*, *δρῶ* from **δρᾱῖω*, Att. *ζῶ*, *κνῶ*, *χρῶ* from **ζῆῖω*, **κνηῖω*, **χρηῖω*; *δέω* from **δεῖω*; *φύω*, Lesb. *φύω* from **φυῖω*; *πτύω* from Indg. **spjūjō*, Lith. *spiáuju*, *I spit*.

δαίομαι, κναίω from *δαιῶμαι, *κναιῶ. γαίω, δαίω, κλαίω from *γαῖῶ, *δαῖῶ, *κλαῖῶ.

ἄλλομαι from *σαλῶμαι : Lat. salio ; βάλλω from *βαλῶ, and similarly θάλλω, πάλλω, σκάλλω, σφάλλω, μέλλω, στέλλω, τίλλω, σκύλλω, &c.

σπαίρω from *σπαρῶ, Indg. *sp̥r̥jō : Lith. spiriù, *I push with the foot*, and similarly σκαίρω, Dor. φθαίρω beside Att. φθείρω, ἀγείρω, αἶρω from *φαρῶ, αἶρω, Lesb. ἀέρρω from *ἀφερῶ, δείρω, Lesb. δέρρω, κείρω, Lesb. κέρρω, μέιρομαι, πείρω, σπείρω, φθείρω, Lesb. φθέρρω, κῦρω, μῦρομαι, φύρω.

βαίνω from *βανῶ, Indg. *g̥m̥jō (§ 65), φαίνω from *φανῶ, and similarly δραίνω, καίνω, κραίνω, Lesb. κταίνω beside Att. κτείνω, Lesb. κτέννω, σαίνω, χραίνω.

βράσσω, Att. βράττω from *βρατῶ, and similarly λίσσομαι, πάσσω. βλύζω from *βλυδῶ, and similarly κνίζω, σχάζω, χάζομαι, &c.

δράσσω, Att. δράττω from *δρακῶ, and similarly θράσσω, τάσσω, φράσσω, λεύσσω, πέσσω (Indg. *p̥éqjō), πράσσω, πλήσσω, φρίσσω, ἀμύσσω, ὀρύσσω, πτύσσω.

ἄζομαι, βάζω from *ἀγῶμαι, *βαγῶ, and similarly κράζω, λάζομαι, σκάζω, σφάζω, ρέζω, βρίζω, κρίζω, λίζω, νίζω (Indg. *n̥iqjō), στίζω, τρίζω, μύζω, τρύζω, &c.

ναίω from *νασῶ : νάσ-σαι, and similarly μαίομαι, κείω.

On the presents ending in -πτω from -πῶ see §§ 129, 1, 473.

§ 479. The -jo- in primary verbs was sometimes a secondary suffix added to other present-formative elements, as κλίνω, Lesb. κλίννω, from *κλινῶ : κλίσις, κρίνω : κρίσις, πλύνω : πέπλυνται, ὀτρύνω. κλάζω from *κλαγγῶ : Lat. clango, πλάζω from *πλαγγῶ : Lat. plango, λύζω from *λυγγῶ (§ 480). κῦδαίνω from *κῦδανῶ : κῦδάνω, and similarly οἰδαίνω, ὀλισθαίνω (§ 487, note).

§ 480. The reduplicated presents of this division generally have a fuller reduplication, and rarely -ι- in the reduplicated syllable, as νη-νέω, μαι-μάω. παι-πάλλω. γαρ-γαίρω, καρ-

καίρω, μαρ-μαίρω, μορ-μύρω, πορ-φύρω. βαμ-βαίνω, παμ-φαίνω. αἰσσω, Att. ἄπτω, from **φαι-φικ-ῶ*, παι-φάσσω. ἰάλλω from **σι-σαλ-ῶ* (cp. § 213, 1) : ἄλλομαι, Lat. *salio*, τι-ταίνω, λι-λαίομαι from **λι-λασ-ῶ-μαι*.

b. Athematic Presents.

§ 481. To this division belong the primary presents which were formed from dissyllabic heavy bases containing the long diphthong *-ēi-* in the second syllable (cp. § 458). The presents of this type originally belonged to the athematic conjugation. In the singular the accent was on the first syllable of the base and in the dual and plural on the personal endings, as base **menēi-*, *think*, sing. **ménī-mi*, **ménī-si*, **ménī-ti*, pl. **mṇī-més*, **mṇī-t(h)é*, **mṇj-énti*. The original athematic inflexion was not preserved in all forms of the present in any of the Indg. languages in historic times. Judging from the Baltic-Slavonic languages (see below) it is probable that the first person singular went over into the *jo*-presents already in the parent Indg. language. In Greek all the presents of this type went entirely over into the thematic conjugation and thus fell together with the *jo*-presents. And the weak stem-form of the dual and plural became generalized, as *μαίνομαι* from **μανῶμαι*, older **mṇjomai* : *ἐμάνην*, *χαίρω* : *ἐχάρην*, *ἔξομαι* from **σεδῶμαι* : Lat. *sedē-re*, *ῥέω* from **ῥδῶ* : *ῥέήσω* for **ῥδῆσω*. Also in Sanskrit most of the presents of this type went over into the thematic conjugation, whereas in Latin and the Germanic languages the two types of presents became mixed, cp. Lat. *capio* from **capjō*, *capis*, *capit*, *capimus*, *capitis*, *capiunt* from **capjont*, beside *farcio* from **farcjō*, *farcis*, *farcit* from older **farcīt*, *farcīmus*, *farcītis*, *farcīunt* from **farcjont*, where the first person singular and the third person plural belong to the thematic conjugation and all the other forms to the athematic. The original distinction

between the inflexion of the two types of presents was best preserved in the Baltic-Slavonic languages, cp. O.Slav. sing. *mīnja*, *I think*, *mīni-ši*, *mīni-tŭ*, pl. *mīni-mŭ*, *mīni-te*, *mīn-ętŭ*, beside sing. *borja*, *I fight*, *borje-ši*, *borje-tŭ*, pl. *borje-mŭ*, *borje-te*, *borja-tŭ*. Whether a present originally belonged to the athematic or to the jo-presents can generally be determined by the fact that the former type of present usually has an *ē*- or an *i*-stem beside it in the non-present forms, cp. *μαίνομαι* : *ἐμάνην*, *μεμανηώς*, *μεμάνημαι*, *μανιά* ; *χαίρω* : *ἐχάρην*, *χαρίς*.

2. DENOMINATIVE VERBS.

§ 482. The formation of the denominative presents was in principle the same as that of the so-called primary jo-presents (§ 478). Apart from the position of the accent in the two types of presents they were identical in formation. In the denominative presents the accent was originally on the *·jó·*, *·jé·*, thus sing. *·jó·*, *·jé-si*, *·jé-ti*, pl. *·jó-mes*, *·jé-t(h)e*, *·jó-nti*. This system of accentuation was preserved in Sanskrit, as sing. *dēva-yá-mi*, *I cultivate the gods, am pious*, *dēva-yá-si*, *dēva-yá-ti*, pl. *dēva-yá-maḥ*, *dēva-yá-tha*, *dēva-yá-nti*, formed from *dēvá·*, *god* ; but in prim. Greek the accent was shifted from the *·jó·*, *·jé·* on to the stem, cp. *φιλέω*, *τιμάω*, *μηνίω*, *φίτύω*, *τεκταίνω*, *τελέω*, *ἐλπίζω*, from prim. Gr. **φιλεῖώ* : *φίλος*, **τιμᾶῖώ* : *τιμά·*, *-ή*, **μηνίῖώ* : *μήνις*, **φίτυῖώ* : *φίτυ*, **τεκτανῖώ* (where *-αν-* = Indg. **-ṇ-*, the weak grade of *-ων*, *-ον-*) : *τέκτων*, **τελεσῖώ* : *τέλος*, *τέλεσ-*, **ἐλπιδῖώ* : *ἐλπίδ-*. By comparing the various languages with one another it can be shown that denominative presents were capable of being formed from all kinds of nominal stems already in the parent Indg. language, and that such presents were formed by the addition of *·jó·*, *·jé·* to the bare stem. The denominative verbs can be conveniently divided into two great groups according as they were formed from stems ending in a vowel or a consonant.

a. Vocalic Stems.

§ 483. The formation of denominative verbs in *-ājō*, *-ejō*, *-ijō*, and *-ujō*, from *ā-*, *o-*, *i-*, and *u-*stems, was common in the parent Indg. language, and making allowance for the special sound-laws of the individual languages, this type of verb was preserved and often became very productive in the oldest period of all the languages. The Greek verbs in *-όω* (see below), formed from the *o*-form of *o*-stems, was a special Greek formation which does not occur in any of the other languages. Before reading the following paragraphs dealing with the contract verbs the student should consult §§ 79–80 on vowel contraction. In Greek as also in other Indg. languages the denominative verbs, formed from *ā-*, *o-*, *i-*, and *u-*stems, have a long vowel in the non-present forms and in the nomina derived from them, as *τῖμήσω*, *ἐτίμησα*, *τῖμητός*, *τίμησις* : *τῖμάω*, cp. Lat. *plantārem*, *plantātus* : *planto*; *φιλήσω*, *ἐφίλησα*, *φιλητός* : *φιλέω*, cp. Lat. *albērem* : *albeo*; *ἐδηρῖσάμην*, *ἀδήριτος* : *δηρίομαι*, cp. Lat. *fīnīrem*, *fīnītus* : *fīnio*; *ἀδάκρυτος* : *δακρύω*, cp. Lat. *statūtus* : *statuo*; *μισθώσω*, *ἐμισθωσα*, *μισθωτός* : *μισθόω*, cp. Lat. *aegrō-tus*. This development of the verbal system took place in prehistoric Greek partly through the influence of the verbs in Class IV (§§ 458–9) and partly through the influence of the verbal adjectives in *-ητος*, *-ωτος*, *-ιτος*, *-υτος*, which themselves were new formations formed after the analogy of the denominative and verbal adjectives in *-ατος*. In some dialects the long vowel in the non-present forms was levelled out into the present. This was especially the case in Boeot. Lesb. and Delph., and also with the verbs in *-ίω*, *-ύω* for *-ίζω*, *-ύω* in Attic and Ionic. In the Boeot. Lesb. Thess. Arcad. and Cyprian dialects the denominative presents in *-άω*, *-έω*, *-όω* often went over into the athematic conjugation after the analogy of the original athematic presents (§ 483, note).

§ 484. The verbs in -άω were originally formed from ā-stems, as *τιμάω*, older **τιμᾶjω*, Indg. -ājō : *τιμά*, -ή, cp. Skr. *ṛṭanā-yā-mi*, *I fight*, *ṛṭanā-yā-ti*, *he fights* : *ṛṭanā*, *fight*, *battle* ; Lat. *planto*, older **plantājō* : *planta*. Some verbs have a long vowel in the root-syllable as compared with the vowel in the corresponding nouns, as *νωμάω* : *νομή*, *στρωφάω* : *στροφή*, *πωτάομαι* : *ποτή*, &c. ā-stems with collective and abstract meaning existed in the parent language by the side of o-stems, whence verbs like *ἀντιάω* : *ἀντίος*, *ἀ-τιμάω* : *ἄ-τιμος*, *γοάω* : *γός*, *ιεράομαι* : *ιέρος*, *λοχάω* : *λόχος*, *μωμάομαι* : *μῶμος*, *φοιβάω* : *φοῖβος*. The short -α- in *τιμάω*, &c. was due to the analogy of the short vowel of the verbs in -έω, -όω, -ίω, -ύω and partly also to verbs formed from jā-stems, as *τολμάω* : *τόλμα*. Cp. §§ 73-4.

§ 485. In the parent Indg. language the denominatives in -ejō (Gr. -έω, Skr. -ayā-, Lat. -eo) were formed from the e-form of the o-stems, cp. Lat. *albeo* : *albus*, *lenteo* : *lentus*, Skr. *dēva-yā-mi*, *I am pious*, *amitra-yā-mi*, *I am hostile*, 3. pers. sing. *dēva-yā-ti*, *amitra-yā-ti* : *dēvá*, *god*, *ámitra*, *enemy*, Gr. *φιλέω*, *ἀριθμέω*, from **φιλεjω*, **ἀριθμεjω* : *φίλος*, *ἀριθμός* ; *κοιρανέω* : *κοίρανος*, *οἰκέω* : *οἶκος*, &c. Through the shifting of the accent in prim. Greek the denominatives in -έω fell together with the causative and iterative verbs *φοβέω*, *τροπέω*, &c. from Indg. -ējō (§ 497). Beside the more general form in -ejō there was also a form in -jō with omission of the final -e of the stem. This was probably due to the fact that numerous vocalic and consonantal stems existed side by side in the parent Indg. language, cp. Skr. *turaṇ-yā-mi*, *I hasten*, *adhvar-yā-mi*, *I sacrifice*, 3. pers. sing. *turaṇ-yā-ti*, *adhvar-yā-ti* : *turaṇá*, *hasty*, *quick*, *adhvará*, *sacrifice* ; Gr. *ἀγγέλλω* from **ἀγγελjω* : *ἄγγελος*, and similarly *αἰδῶ*, *δαιδάλλω*, *καμπύλλω*, *ποικίλλω*, &c. ; *φαεῖνω* from **φαφεσνjω* : *φαεινός* from **φαφesonω*, *μειλίσσω* from **μειλιχjω* : *μείλιχος*, *χαλέπτω* from **χαλεπjω* (§§ 129, 1, 473) : *χαλεπός*.

§ 486. The denominatives in -όω, which are generally factitive in meaning, were a special Greek new formation and came to be formed from the o-form of o-stems already in the prehistoric period of the language, as δουλόω : δούλος, δηλόω : δηλός, μισθόω : μισθός, νέω : νέος, πολεμώ : πολεμέω : πόλεμος, χρῦσόω : χρῦσός, &c. This type of present became productive and was extended to other than o-stems, as ξημιόω : ξημίᾱ, γεφῦρόω : γέφυρα, πλατόω : πλατύς, ὀρνιθόω : ὀρνίθ-.

§ 487. κονίω from *κονιω (Indg. -ijō, Skr. -īyā-) : κόνις, μητίομαι, Lat. mētior : μήτις, and similarly δηρίομαι, μαστίω, μηνίω, &c., cp. Skr. jani-yā-ti, he seeks a wife : jāni-, wife; sakhi-yā-ti, he desires friendship : sākhi-, friend; Lat. finio, grandio, lēnio : finis, grandis, lēnis.

§ 488. δακρύω from *δακρυῖω (Indg. -ujō, Skr. -ūyā-) : δάκρυ, and similarly ἀχλύω, γηρύω, ἰθύω, μεθύω, φιτύω, &c., cp. Skr. gātu-yā-ti, he sets in motion : gātú-, motion; śatru-yā-ti, he treats as an enemy : śatru-, enemy; Lat. acuo, statuo : acus, status.

§ 489. The denominatives in -εύω, prim. Gr. -ηfjō, were formed from the stem of nouns of the type of βασιλεύς from *βασιληvs : *βασιληf- (§ 338). The -ηfjō would regularly have become -είω (through the intermediate stages -ηfω, -ειfω) which is found in the dialect of Elis. In βασιλεύω for *βασιλείω the -εύ- was introduced into the present after the analogy of the other tenses, and it may also in part be due to the influence of the nominative singular of the corresponding noun, and similarly ἀριστεύω, ἱερεύω, ἱππεύω, νομεύω, πομπεύω, τορεύω, φονεύω, χαλκεύω, &c. This type of present became productive in the oldest period of the language and was extended to other than -εύ-stems, as θηρεύω : θήρᾱ, βουλεύω : βουλή, ἀγορεύω : ἀγορά, οἰνοχοεύω : οἰνοχόος, μαντεύομαι : μάντις, δραγμαεύω : δράγμα, ἀληθεύω : ἀλήθης.

b. Consonantal Stems.

§ 490. From **n**-stems, as *ὀνομαίνω* from **ὀνομανῆω* (= Indg. *-ṇjō*) : *ὄνομα*, *ποιμαίνω* from **ποιμανῆω* : *ποιμήν*, and similarly *εὐφραίνω* : *εὐφρων*, *κῡμαίνω* : *κῡμα*, *μελαίνω* : *μέλαν*, *πῖαίνω* : *πίων*, *σπερμαίνω* : *σπέρμα*, *τεκταίνω* : *τέκτων*, &c. This type of present became productive in the oldest period of the language and after the analogy of it were formed a large number of verbs from other than **n**-stems. These new formations generally had a factitive meaning, as *βασκαίνω* : *βάσκανος*, *κερδαίνω* : *κέρδος*, and similarly *λειαίνω*, *λευκαίνω*, *λιταίνω*, *πικραίνω*, &c. ; *γλυκαίνω* : *γλυκύς*. After the analogy of the verbs in *-αίνω* were formed those in *-ύνω* from **u**-stems, as *ἀρτύνω* : *ἀρτύς*, and similarly *βραῦνω*, *βραδύνω*, *ἡδύνω*, *θρασύνω*, *ιθύνω*. And then further after the analogy of these were formed new denominatives like *αἰσχύνω* : *αἰσχός*, *κακύνω* : *κακός*.

§ 491. From **r**-stems, as *τεκμαίρω* from **τεκμαρῆω* (= Indg. *-ṛjō*) : *τέκμαρ*. Analogical formations from other than **r**-stems were *γεγαίρω* : *γεγαρός*, *ἐχθαίρω* : *ἐχθρός*, *καθαίρω* : *καθαρός*, &c. *μαρτύρομαι* from **μαρτυρῶμαι* : *μάρτυρ*, and similarly *κινῶμαι* : *κινυρός*, *μινῶμαι* : *μινυρός*.

§ 492. From **s**-stems, as *τελέω*, Hom. *τελείω*, Att. *τελῶ* from **τελεσῆω* : *τέλος*, stem *τέλεσ-*, cp. Skr. *apas-yá-mi*, *I am active*, *apas-yá-ti*, *he is active* : *ápas-*, Lat. *opus*, *work* ; Goth. *riqizjan*, *to become dark* : *riqis*, *darkness* ; and similarly *ἀκέομαι* : *ἄκος*, *ἀνθέω* : *ἄνθος*, *πενθέω* : *πένθος*, *νεϊκέω* : *νεῖκος*, &c. *αἰδέομαι* from **αἰδεσῶμαι* : *αἰδεσ-* : *αἰδώς*. Forms like *ιδρώω* from **σφιδροςῆω*, *ρίγῶω*, Hom. *γελῶω*, *ιδρώω* were formed direct from the nominative *ιδρός*, *ρίγος*, *ιδρώς*, *γέλως*.

§ 493. From dental stems, as *αἰμάσσω* from **αἰματῆω* : *αἷματ-*, *βλίσσω*, *βλίσσω* (§ 129, 6) : *μέλιτ-*, *κορύσσω* from **κορυθῆω* : *κόρυθ-*. *ἐλπίζω* from **ἐλπίδῆω* : *ἐλπίδ-*, and similarly *ὀπίζομαι*, *λιθάζω*, *μιγάζομαι*, &c.

§ 494. From guttural stems, as *κηρύσσω* from **κηρυκῶ* : *κήρυξ*, *-ῦκος*, *βήσσω* from **βηχῶ* : *βήξ*, *βηχός*, *θωρήσσω* : *θώραξ*, *-ἄκος*, &c. *ἄρπάζω* from **ἄρπαγῶ* : *ἄρπαξ*, *-αγος*, and similarly *μαστίζω*, *σαλπίζω* from **σαλπιγγῶ* (§ 156).

§ 495. The denominatives in *-άζω*, *-ίζω* from *-αδῶ*, *-αγῶ*, *-ιδῶ*, *-ιγῶ* became productive and gave rise to a large number of analogical formations from all kinds of stems, as *ἀγαπάζω* : *ἀγαπάω*, *πειράζω* : *πειράω*, *δικάζω* : *δίκη*, *καναχίζω* : *καναχή*, *δοκιμάζω* : *δόκιμος*, *ἡσυχάζω* : *ἡσυχος*, *δειπνίζω* : *δείπνον*, *ἀκοντίζω* : *ἄκων*, *μακαρίζω* : *μάκαρ*, *αἱματίζω* : *αἷμα*.

§ 496. The formation of the denominatives in *-ώσσω*, *-ώττω* is uncertain inasmuch as it cannot be determined whether it originally arose from dental or guttural stems. It is possible that this type of verb started out from *ἀμβλυνώσσω* from **ἀμβλυωκῶ* : *ἀμβλυωπός*, *τυφλώσσω* : *τυφλώψ*, and that they were formed before the velar guttural became *π* in *-ωπ-*, cp. the parallel forms Skr. *akṣi*, Gr. *ὄσσε* from **ὄκῃ*, Indg. **oqī*, *bothi eyes*, Lat. *oc-ulus*, beside *ὄψομαι*, *ὀπτέον*. The *-ώσσω* in these verbs may have become productive and extended by analogy to other than guttural stems, as *λιμώσσω* : *λίμος*, *ὀνειρώσσω* : *ὄνειρος*, *ὑγρώσσω* : *ὑγρός*, *ὑπνώσσω* : *ὑπνος*, &c.

3. CAUSATIVE AND ITERATIVE VERBS.

§ 497. Causative and iterative verbs were common in the parent Indg. language and were also preserved in the oldest period of all the separate languages. This type of present was formed by the addition of the formative suffix *-éjo-*, *-éje-* to the root-syllable which contained the *o* grade of ablaut (= Gr. *o*, Lat. *o*, Goth. *a*, Skr. *ā*), as Indg. sing. **sod-éjō*, *I cause to sit, set*, **sod-éje-si*, **sod-éje-ti*, pl. **sod-éjo-mes*, **sod-éje-t(h)e*, **sod-éjo-nti* = Skr. *sād-āyā-mi*, *sād-āya-si*, *sād-āya-ti*, *sād-āyā-maḥ*, *sād-āya-tha*, *sād-āya-nti*, Goth. *sat-ja*, *sat-jis*, *sat-jip̃*, *sat-jam*, *sat-jip̃*, *sat-*

jand : root *sed-, *sit*; **φοβέω** from *φοβεῖω : **φέβομαι**, and similarly **σοβέω** : **σέβομαι**, cp. Lat. **noceo** : **neco**, **moneo** : **memini**; Engl. **fell**, **set** : **fall**, **sit**.

ποτέομαι from *ποτεῖομαι, Skr. **pāt-áyā-mi** : **πέτομαι**, Skr. **pātā-mi**, *I fly*, and similarly **βρομέω** : **βρέμω**, **ὀχέομαι** : Lat. **veho**, **σκοπέω** : **σκέπτομαι**, **στροφέω** : **στρέφω**, **τρομέω** : **τρέμω**, **τροπέω** : **τρέπω**, **φοβέομαι** : **φέβομαι**, **φορέω** : **φέρω**, &c.

After the shifting of the accent in the denominative presents formed from **o**-stems, as **φιλέω** from *φιλεῖω, older -εῖω (§ 482) verbs like **φοβέω**, **φορέω** came to be regarded as being formed from the nouns **φόβος**, **φόρος**, and then after the analogy of **φιλέω** : **φιλήσω**, **ἐφίλησα**, **φιλητός**, to **φορέω** were formed **φορήσω**, **ἐφόρησα**, **φορητός** for ***φοριτός** where -ιτός was the regular Indg. ending of the verbal adjective belonging to this type of present, cp. Lat. **monitus** : **moneo**, Goth. **satips** : **satjan**, *to set*, Skr. **vartitāḥ** : **vart-áyā-mi**, *I turn*.

THE FUTURE.

§ 498. It is doubtful whether the parent Indg. language had special forms which were exclusively used to express future meaning. By comparing together the oldest periods of the different languages we are forced to the conclusion that it must have been expressed in various ways. In Sanskrit and Lithuanian the future was formed by means of the formative element **-sjó-**, **-sjé-** which was an extension of the **-s-** element occurring in Class IX of the presents (§ 468). This **-sjó-** future belonged to the thematic conjugation and was inflected like a present, as Skr. **dā-syá-mi** (Lith. **dũ-siu**), *I shall give*, **dā-syá-si**, **dā-syá-ti**, pl. **dā-syá-maḥ**, **dā-syá-tha**, **dā-syá-nti** = Indg. ***dō-sjó**, ***dō-sjé-si**, ***dō-sjé-ti**, pl. ***dō-sjó-mes**, ***dō-sjé-t(h)e**, ***dō-sjó-nti**. This formation may also exist in Greek in the future formed from bases or stems ending in an explosive, as **δείξω**, Skr.

dēk-šyá-mi, Indg. *deik-sjō, but it is far more probable that such is not the case, because the future formed from the other bases or stems cannot be explained as being of this origin.

The present with momentary meaning was also originally used with a future meaning, and a few such forms also occur in Greek, as δῆω, εἶμι, νέομαι (§ 424). This mode of expressing the future became productive in the old Germanic and Slavonic languages. And in like manner the subjunctive of a presential or second aorist stem was also used with a future meaning, as ἔδομαι (Skr. pres. indic. ád-mi, *I eat*), πίομαι, χέω, Hom. βείομαι, cp. also Lat. *ero* = ἔω, ὦ, Indg. *ésō.

§ 499. The ordinary Greek future was originally the subjunctive of the s-aorist which came to be used for the future, cp. also the similar forms in Lat. *capso, dīxo, faxo*, &c. This subjunctive of the s-aorist had the same root-vowel as the present indicative. It belonged to the thematic conjugation and was inflected like a present, as sing. -sō, -se-si, -se-ti, pl. -so-mes, -se-t(h)e, -so-nti, whereas the indicative of the s-aorist belonged to the athematic conjugation (§ 507). The Greek future can be conveniently divided into two great categories according as it appears with or without the medial -σ-. The medial -σ- regularly remained in bases or stems ending in an explosive, as λείψω, ὄψομαι, πέψω, τέρψω; βλάψω, βλάψομαι, τύψω; πλέξω; ἄξω, ζεύξω, πρᾶξω, φεύξομαι; φράσω: φράζω from *φραδῶ, σπείσω: σπένδω, πείσω: πείθω; γλύψω, γράψω, γράψομαι, θρέψω, θρέψομαι: τρέφω; τεύξομαι; διδάξω, ποιήξω; ἀρπάξω, κηρύξω, σαλπύγξω, &c. After the analogy of these and similar forms the medial -σ- was restored in all verbs the base or stem of which ended in a long vowel or diphthong (see § 213, 2), as θήσω, δώσω (Hom. also διδώσω), στήσω; λύσω; ἁμαρτήσομαι, βοσκήσω, βουλήσομαι, γενήσομαι, εἰδήσω, εὐδήσω, μανήσομαι, μνήσω, ὀξήσω, ποιήσω, σχήσω,

τυπτήσω, χαιρήσω, γνώσομαι; τῖμήσω, φιλήσω, δηλώσω; τείσω, πλεύσομαι, οἶσω. In the primary verbs the long vowel had its origin in monosyllabic (§§ 454-5) and dissyllabic (§ 458) heavy bases.

The medial -σ- generally disappeared (§ 213, 2) in the future formed from dissyllabic heavy bases with a short vowel in the second syllable, as ἐλάω, κρεμάω, ὁδομαι, καλέω, ὀλέω, βαλέω, γαμέω, τενέω, Hom. πεσέομαι from *πετεσομαι = Att. ἐλῶ, κρεμῶ, ὁμοῦμαι, καλῶ, ὀλῶ, βαλῶ, γαμῶ, τενῶ, πεσοῦμαι (§ 80), and similarly στελέω, στελέομαι, νεμέω, τεμέω, θενέω, μενέω, φανέω, φθερέω, &c. The -σ- was sometimes restored again, especially in epic Greek, as δαμάσω, ἐλάσω, κρεμάσω, ὀλέσω; κέλσω, ὄρσω, φθέρσω, &c. (cp. §§ 212, 3, 217).

After the analogy of forms like καλέω, τενέω, φθερέω were formed futures to denominative verbs with stems ending in a nasal, liquid, dental or -s, and to verbs with a nasal suffix in the present, as Ion. οὐνομανέω : ὀνομαίνω, ἀγγελέω : ἀγγέλλω, τεκμαρέομαι : τεκμαίρομαι, δικάω, δικῶ beside δικάσ(σ)ω : δικάζω from *δικαδῆω, κοιμῶ beside κομίσ(σ)ω : κομίζω from *κομιδῆω, τελέω, τελῶ beside Hom. τελέσσω : τελέω from *τελεσῆω; κλινέω : κλίνω from *κλινῆω, κρινέω : κρῖνω, Hom. ἀνύω, τανύω beside ἀνύσω, τανύσω.

§ 500. The so-called Doric future, which also occurs in a few Attic verbs, was a new formation and arose from the contamination of the futures in -σω with those in -έω from -έσω, as δειξέω, ἰδησῶ : Att. δείξω, εἰδήσω, νευσοῦμαι : νέω, πλευσοῦμαι : πλέω, πνευσοῦμαι : πνέω, also Att. κλαυσοῦμαι : κλαίω, φευξοῦμαι beside φεύζομαι, χεσοῦμαι : χέζω.

§ 501. Special Greek new formations were the futures formed from the perfect and from the passive aorists in -ην (§ 508), -θην (§ 514). The futures formed from the perfect active are rare, but those formed from the perfect middle are common, as Att. ἐστήξω : ἔστηκα, τεθνήξω : τέθνηκα.

γεγράψομαι, λελείψομαι, μεμνήσομαι, τετρίψομαι, &c. This formation came to be regarded as a reduplicated future and then futures like δεδήσομαι, λελύσομαι, τετεύξομαι were formed direct from the simple future δήσω, λύσω, τεύξω. Examples of futures formed from the passive aorists in -ην, -θην are φανήσομαι : ἐφάνην, σβήσομαι : ἔσβην, and similarly βλαβήσομαι, γραφήσομαι, μανήσομαι, σταλήσομαι, στραφήσομαι, &c.; δοθήσομαι : ἐδόθην, τιμηθήσομαι : ἐτίμηθην, and similarly κλιθήσομαι, λυθήσομαι, πεισθήσομαι, ταθήσομαι, φιληθήσομαι, δηλωθήσομαι, &c. It should be noted that the future in -θησομαι does not occur in Homer and that in Doric both types of futures have active personal endings, as ἀναγραφῆσει, ἐπιμεληθήσεντι = Att. ἀναγραφῆσεται, ἐπιμεληθήσονται.

THE AORIST.

§ 502. The parent Indg. language had two kinds of aorists, the root-aorist, also called the strong or second aorist, and the s-aorist. Although there was doubtless originally a difference in meaning and function between the root- and the s-aorist, the difference had disappeared before the parent language became differentiated into the separate languages. These two kinds of aorists were preserved in Greek, Aryan and the Slavonic languages, but in the other languages they either disappeared entirely or came to be used for other tenses. The aorist in -θην (§ 514) was a special Greek formation which does not occur in the other languages.

I. THE ROOT- OR STRONG AORIST.

§ 503. The strong aorist has for the most part been already dealt with in the formation of the present with which it is morphologically closely related, but even at the risk of repetition it is advisable to treat it here in a con-

nected manner. In the dissyllabic bases the only distinction between the base of the aorist and of the present was that caused by the original difference in the position of the accent and the consequent difference in the ablaut-grade, cp. *λείπε* : *λιπέ*, Indg. **léiq(e)* : **liqé*-, in *λείπω* : *λιπείν* ; *πέτα* : *πτᾶ*-, *πτή*-, Indg. **pétə* : **ptá*-, in *πέτα-μαι* : *πτήναι*, Dor. *ἔπταν* (§ 458). On the other hand it is not always possible to draw a hard and fast line between the formation of the aorist and the imperfect in Greek, cp. aor. *ἔβην*, *ἔστην*, *ἔδρακον* beside impf. *ἔφην* : *φημί*, *ἔγραφον* (and similarly with other aorist-presents, § 456). *ἔτεκον*, *ἐγενόμην* were properly the imperfect of the lost verbs **τέκω*, **γένομαι*, but they came to be regarded as the aorist of *τίκτω* and *γίγνομαι*. In the strong aorist we have to distinguish three types :—

a. Monosyllabic heavy Ablaut-bases (§§ 454–5).

§ 504. In the aorists of this type the root-syllable had the strong grade of ablaut in the active singular, but the weak grade in the dual, plural and the whole of the middle, as **ἔδων*, **ἔθην*, *ἔστην*, Dor. *ἔστᾶν* : pl. *ἔδομεν*, *ἔθεμεν*, **ἔσταμεν* = Skr. *ádām*, *ádhām*, *ásthām*, pl. *ádāma*, *ádhāma*, *ásthāma* (for **ádima*, **ádhima*, **ásthima*) with *-ā*- levelled out from the singular, and similarly *ἔστημεν* for **ἔσταμεν*. The regular form with *-i-* occurs in the middle, as *ádita* = *ἔδοτο*. The Greek third person plural *ἔδοσαν*, *ἔθεσαν*, *ἔστησαν* had the ending *-σαν* from the s-aorist (§ 507), and similarly *ἔδυσαν* : *δείκνυμι*. *ἔδωκα*, *ἔθηκα* with the same *-κα* which occurs in the κ-perfect (§ 520) were used for the sing. **ἔδων*, **ἔθην* in Old Attic until the fourth century B.C. and from then onwards the *-κα* became extended to the dual and plural; cp. also *ἦκα* : Lat. *jē-cī*, pl. *ēīμεν* from **ἔῑμεν*.

b. Dissyllabic light Bases (§§ 456-7).

§ 505. This type of aorist, without and with reduplication, belonged to the so-called thematic conjugation, as *λιπεῖν*, *ἔλιπον* : *λείπω*, *πιθέσθαι*, *ἔπιθον* : *πείθω*, *ῥηρῖον* : *ἐρείκω*, *ῥηριον* : *ἐρείπω*, *ἔστιχον* : *στείχω*; *ἔκυθον* : *κεύθω*, *πυθέσθαι* : *πεύθωμαι*, *ἔρυγιν*, *ῥρυγον* : *ἐρεύγομαι*, *τυχεῖν* : *τεύχω*, *ἔφυγον* : *φεύγω*; *ἔδρακον* = Skr. *ādr̥śam* : *δέρκομαι*, *τραπεῖν* : *τρέπω*, *ἔτραφον* : *τρέφω*. To verbs with characterized presents, as *λαβεῖν*, *ἔλαβον* : *λαμβάνω*, *λαθεῖν*, *ἔλαθον* : *λανθάνω*, *ἔλαχον* : *λαγχάνω*; *δακεῖν*, *ἔδακον* : *δάκνω*, *καμεῖν*, *ἔκαμον* : *κάμνω*; *θανεῖν*, *ἔθανον* : *θνήσκω*; *βαλεῖν*, *ἔβαλον* : *βάλλω* from **βαλῆω*.

ἐσπέσθαι, *ἔσπετο* : *ἔπομαι*, *ἐκέκλετο*, *κέκλετο* : *κέλομαι*, *πεπιθ-εῖν*, *πέπιθον* : *πείθω*, *τετυκεῖν* : *τεύχω*, *τε-τάρπετο* : *τέρπω*, Hom. *ἔειπον* from **ἔ-φε-φπον* = Skr. *ān̥d̥cam* from **ā-va-uc-am*, Indg. **é-we-wqom*; *ἔτετμον*, *ἔπεφνον*. *ἤγαγον* : *ἄγω*, *ἤνεγκον*, inf. *ἐνεγκεῖν*; *ἤραρον*, inf. *ἄραρεῖν*; *ᾠρορον* : *ᾠρυνμι*.

c. Dissyllabic heavy Bases (§§ 458-9).

§ 506. The aorists of this type belonged to the athematic conjugation and originally contained a long vowel or the long diphthong *-ēi-* in the second syllable of the base. The long vowel including the *-ē-* from older *-ēi-* (§ 458) belonged to all forms of the active and middle, but it was regularly shortened in the third person plural in prim. Greek (§ 70), as *πτῆναι*, Dor. *ἔπταν* : *πέταμαι*, *ἔδραν* : Skr. *dr̥ā-ti*, *he runs*, Hom. *πλήτο* : Skr. *ā-prā-t*, *he filled*, Hom. *πλήτο* : *πελάζω*, Att. *ἐγήραν* : *γηράσκω*; *ἔτλην*, Dor. *ἔτλᾱν*, *ἔσβην*, *ἔγνω*; *ἔβλην*, *ἐμάνην*, *ἐφάνην*, *ἐχάρην*; *ἔφυν*, *ἔφῦ* = Skr. *ā-bhū-t*, from **é-bhū-t*, older **é-bhwē-t*, *he was* : base **bhwē-*, *be*. It is not clear in what relation *ἔβην* (Dor. *ἔβᾱν*), *ἔβη* = Skr. *āgām*, *āgāt*, stands to *βαίνω*, Lat. *venio*. These aorists in *-ην* = Indg. *-ēm* with in-

transitive meaning became productive in Greek and came to be used as passive aorists (§ 514), as ἐκλάπην : κλέπτω, ἐγράφην : γράφω, ἐμίγην : μίγνυμι, ἐρρύην : ῥέω, ἐσάπην : σήπω, ἐτάκην : τήκω, ἐτάρπην : τέρπω, ἐτράπην : τρέπω, &c.

2. THE S-AORIST.

§ 507. The s-aorist, also called the weak or first aorist, belonged to the athematic conjugation and originally had the following endings :—sing. -s-m̐, -s-s, -s-t, pl. -s-men or -s-m̐ (§ 437), -s-te, -s-nt. In formation it was morphologically related to the s-presents of Class IX (§ 468) and stood in the same relation to those presents as the strong aorist did to its corresponding presents (§ 456). The s-aorist was preserved in Greek, Aryan and the Slavonic languages, whereas in Latin it came to be used for the perfect (cp. *ē-dēixa*, *ō-peξα*, Skr. *á-vākṣam* beside *dīxi*, *rēxi*, *vēxi*), and in the other languages it disappeared entirely except in a few isolated forms. This type of aorist became very productive in Greek, especially as an aorist-formation for denominative verbs and for those verbs which did not have a root-aorist. The inflexion of an aorist like *ē-dēixa* was in the parent Indg. language :—sing. **é-dēik-s-m̐*, **é-dēik-s-s*, **é-dēik-s-t*, pl. **é-dik-s-men* (-m̐), **é-dik-s-te*, **é-dik-s-nt*. In Sanskrit the long diphthong or long vowel of the singular was levelled out into the dual and plural, cp. Skr. *árāikṣam*, *árāikṣma* = *ἐλείψα*, *ἐλείψαμεν*; *áyāukṣam*, *áyāukṣma* = *ἐζεύξα*, *ἐζεύξαμεν*; *ákṣārṣam*, *ákṣārṣma* = *ἐφθείρα* from **éφθερσα* (§ 217), *ἐφθείραμεν*; cp. the similar levelling in Latin *diximus*, *rēximus* : *dīxi*, *rēxi*. The long diphthong of the singular was regularly shortened in prim. Greek (§ 63) and then levelled out into the dual, plural and extended by analogy to the whole of the middle which originally contained the weak grade of ablaut, cp. Skr. middle *ádikṣi*, *áyukṣi* beside Gr. *ἐδείξαμην*, *ἐζεύξαμην*. The old weak grade of ablaut

was preserved in *ἴσαν*, and *ῆσαν* from **ῆφισαν*, *they knew*, but apart from a few such isolated forms the vowel in the stem-syllable of the active and middle of the s-aorist to dissyllabic bases was due to the analogy of the present stem and the stem of the aorist subjunctive = s-future (§ 499). This is especially clear in such forms as *ἐγλῦψα*, *ἔγραψα*, *ᾠμоргα*, *ἔστιξα*, *ἔσχισα* : *γλύφω*, *γράφω*, *ὁμоргυνῦμι*, *στίζω*, *σχίζω*, *ἐπηλα* from **ἐπαλσα* : *πάλλω*. Aorists like *ἔδειξα*, *ἔζευξα* can represent the original forms with long diphthongs or be new formations with *-ει-*, *-ευ-* from the present. The prim. Greek inflexion of the active and middle of *ἔδειξα*, *ἔλῦσα* and similar aorists was :—

| | | | | |
|-------|---------------------|-------------------|---------------------|-------------------|
| Sing. | <i>*ἔδεικσ-α</i> | <i>*ἔλῦσ-α</i> | <i>*ἔδεικσ-μᾶν</i> | <i>*ἔλῦσ-μᾶν</i> |
| | <i>*ἔδεικσ-ς</i> | <i>*ἔλῦσ-ς</i> | <i>*ἔδεικσ-σο</i> | <i>*ἔλῦσ-σο</i> |
| | <i>*ἔδεικσ-(τ)</i> | <i>*ἔλῦσ-(τ)</i> | <i>*ἔδεικσ-το</i> | <i>*ἔλῦσ-το</i> |
| Plur. | <i>*ἔδεικσ-μεν</i> | <i>*ἔλῦσ-μεν</i> | <i>*ἔδεικσ-μεθα</i> | <i>*ἔλῦσ-μεθα</i> |
| | <i>*ἔδεικσ-τε</i> | <i>*ἔλῦσ-τε</i> | <i>*ἔδεικσ-σθε</i> | <i>*ἔλῦσ-σθε</i> |
| | <i>*ἔδεικσ-α(τ)</i> | <i>*ἔλῦσ-α(τ)</i> | <i>*ἔδεικσ-ατο</i> | <i>*ἔλῦσ-ατο</i> |

The *-α* in the first person singular of the active regularly corresponds to Indg. *-m* (§ 65, 1) and in the third person plural to Indg. *-n* (§ 65, 1). The ending of the first person singular thus fell together with the ending of the perfect (*οἶδα*, *λέλοιπα*). After the analogy of *οἶδα* : *οἶδε* to *ἔδειξα* was formed *ἔδειξε*, and then the *-α* of the first person singular was levelled out into the second person, and at a later period the *-ας* was extended analogically to the perfect (*λέλοιπας*). The *-α* of the third person plural was levelled out into the dual and the other persons of the plural. Hence arose the usual forms : *ἔδειξα*, *ἔδειξας*, *ἔδειξε*; *ἐδείξατον*, *ἐδείξάτην*; *ἐδείξαμεν*, *ἐδείξατε*, *ἔδειξαν* (with *-ν* from imperfects like *ἔφερον*, § 439); *ἔλῦσα*, *ἔλῦσας*, *ἔλῦσε*; *ἐλύσατον*, *ἐλῦσάτην*; *ἐλύσαμεν*, *ἐλύσατε*, *ἔλυσαν*. From the active the *-α-* was then extended to all forms of the middle (*ἐδειξάμην*, *ἐλῦσάμην*;

ἐδείξαντο, ἐλύσαντο with -ντο from thematic verbs like ἐφέροντο; ἐδείξω, ἐλύσω with -ω from older -ασο), including the optative, imperative, infinitive and participle.

Before this levelling out of the -α- took place the -σ- in the dual and the first and second persons plural of the active and in the whole of the middle except the third person plural regularly disappeared in prim. Greek when the stem ended in a consonant (§§ 214, 221), but it was generally restored again at a later prehistoric period after the analogy of forms where it regularly remained. The regular old middle was preserved in Homeric forms like ἄλτο, ἄλμενος : ἄλλομαι, ἄρμενος : ἦρσα, δέκτο : δέχομαι, κατέπηκτο : κατέπηξα, λέκτο : ἔλεξα, ἔμικτο : ἔμιξα, πάλτο : ἔπηλα from *ἐπαλσα; ὤρτο : ὤρσα, &c.

§ 508. When the base ended in a nasal the -μσ- and -νσ- became assimilated to -μμ-, -νν- which remained in Lesb. and Thess. but became simplified with lengthening of the preceding vowel in the other dialects as ἐνειμα, Lesb. ἐνεμμα : νέμω; ἔμεινα, Lesb. ἔμεννα : μένω (§ 216); ἔφηνα from *ἐφανσα : φαίνω, ὕφηνα from *ὕφανσα : ὑφαίνω; and similarly with the verbs in -αίνω, as ἐλέηνα : λεαίνω, Hom. λειαίνω, ὠνόμηνα : ὀνομαίνω, ἐξήρᾱνα (§ 216) : ξηραίνω; ἐπέρᾱνα : περαίνω.

§ 509. When the base or stem ended in a liquid assimilation also generally took place, with simplification of the double liquid and lengthening of the preceding vowel in Att. Ion., as ἔπηλα from *ἐπαλσα : πάλλω; ἔστειλα, Lesb. ἔστελλα : στέλλω; ἔσφηλα, ἡγγεῖλα, ἔτιλα; ἔφθειρα, Lesb. ἔφθερρα from *ἐφθερσα : φθείρω; ἔσῦρα (§ 217), &c., beside ἔκελσα, ἔκερσα, ὦρσα. In bases or stems ending in a dental the dental + -σ- became -σσ- which was simplified to -σ-, as ἔβλισα : βλίστω, βλίσσω from *βλιτῶ; ἔπερσα : πέρθω, ἔπεισα : πείθω; ἔψευσα : ψεύδω, ἐφεισάμην : φείδομαι, ἡλπισα : ἐλπίζω from *ἐλπιδῶ (§ 166). The ζ in presents ending in -ζω came from -δζ- and -γζ- (§ 129, 8).

When it came from the former the aorist regularly had *-σ-* from older *-σσ-*, and *-ξ-* when from the latter, but in consequence of the presents being alike confusion arose in the aorist, cp. Hom. ἤρπασα beside ἤρπαξα : ἀρπάξω from *ἀρπαγῶ; Att. ἐσάλπισα beside ἐσάλπιγξα : σαλπίζω from *σαλπιγγῶ. In Doric the *-ξ-* became generalized for both kinds of aorists. On forms like Hom. ἔξεσσα, ἔτρεσσα, ἐτέλεσσα beside Att. ἔξεσα, ἔτρεσα, ἐτέλεσα : ζέω, τρέω, τελέω from *ξεσω, *τρεσω, *τελεσῶ, see § 212, 2. This *-σσ-* from bases or stems ending in *σ* became productive in the oldest period of the language and is common in Aeolic, Homer and his imitators, as ἐγέλασσα, ἔμεσσα, ἐπέρασσα, δαμάσσαι, ἐλάσσαι, κρεμάσσαι, ὀλέσσαι, ὁμόσσαι, &c.

§ 510. The *-σ-* also regularly disappeared in prim. Greek in several of the forms of bases or stems ending in a vowel, viz. in the first person singular of the active, the third person plural of the active and middle (§ 213, 2), in the first person singular of the middle and the first person plural of the active and middle (§ 214), but here again the *-σ-* was mostly restored after the analogy of those forms of the vocalic and consonantal bases and stems where it regularly remained. In aorists like ἡλεύατο : ἡλευσα, ἔσσευα (ἔσευα), ἔχεα (Hom. also ἔχευα), ἀλέασθαι the old *σ*-less form became generalized. Apart from a few such isolated aorists without *-σ-*, all the vocalic bases and stems had intervocalic *-σ-* already in the oldest historic period of the language, as ἤμεσα, ἐδάμασα, ὤμοσα, ἔχρησα (§ 512); ἐτίμησα, ἐφίλησα, ἐμίσθωσα (§ 483); ἐφόρησα (§ 497).

§ 511. The stem-syllable of dissyllabic light bases had originally a lengthened vowel or diphthong in the singular of the active and weak grade vowel in the dual, plural and the whole of the middle (§ 507), but this original distinction was not entirely preserved in any of the languages in historic times. As we have already seen the Greek stem

of the aorist was a new formation formed direct from the present-stem and the stem of the aorist subjunctive (§ 507), as ἔβλαψα : βλάπτω, ἔπεμψα : πέμπω, ἔλεξα : λέγω, ἔπλεξα : πλέκω, and similarly ἔγραψα, εἶξα, ἔκοψα, ἔτερψα, ἔτηξα, ἔθρεψα, &c.; middle ἔγραψάμην, ἔκοψάμην, ἔθρεψάμην, ἔπλεξάμην, &c. ἔδειξα : Lat. *dixi*, ἔλειψα : Skr. *ārāikṣam*; ἔζευξα : Skr. *ājāukṣam*, ἔτευξα : τεύχω, ἔχεα (Hom. also ἔχευα) : χέω; middle ἔδειξάμην, ἔζευσάμην, ἔχεάμην, &c. In forms like ἔτεισα : Skr. *ācāiṣam*, ἔπλευσα the intervocalic -σ- was restored after the analogy of forms like ἔδειξα, &c. where the -σ- was not intervocalic. ἔσφηλα, ἔφθειρα from *ἔσφαλσα, *ἔφθερσα (§ 217), and similarly ἔτιλα, ἔδειρα, ἔσῦρα, &c. beside ἔκελσα, ἔκερσα, ὥρσα. ἔτεινα from *ἔτενσα (§ 218), and similarly ἔκτεινα, ἔμεινα, ἔνειμα, ἔθεινα; ἔσπεισα from *ἔσπενσα : σπένδω. ἔπεισα : πείθω, ἔψευσα : ψεύδω (§ 166). ἔζεσα : ζέω (§ 212, 2), εὔσα : εὔω.

§ 512. The aorists formed from dissyllabic heavy bases belong to the presents of Class IV (§ 458) and may be divided into two types according as the second syllable of the base contained the weak or the strong grade of ablaut. To the former belong aorists like ἤμεσα : ἔμέω, ὤλεσα; ἐδάμασα : δαμάω, ἐκέρασα, ἐκλασα, ἐκρέμασα, ἤλασα, ἐπέλασα, ἐγήρασα; ἤροσα, ὤμοσα; ἔφῦσα : ἔφῡν. And to the latter ἐδέησα, ἐδεύησα, ἐθέλησα, ἔμνησα, ἔνησα, ἔχρησα; ἐδρᾶσα; ἀν-έγνωσα : Skr. *ājñāsam*. The intervocalic -σ- in all these and similar aorists was restored after the analogy of aorists like ἔδειξα, &c.

§ 513. The formative element of characterized presents was often extended to the aorist, as ἔκλινα from *ἔκλινσα : κλίνω from *κλι-νῶ; ἡμῦνα, ἡμῦνάμην : ἀμύνω; ἔπλαγξα : πλάζω from *πλαγγῶ, cp. Lat. *plango*, *plānxi*; ἐδίδαξα, ἐποίφυξα, ἐτέτηρνα : διδάσκω, ποιφύσσω, τετραίνω, &c.

THE PASSIVE AORIST IN *-θην*.

§ 514. The parent Indg. language had no special forms which were used exclusively to express the passive voice, but already at that period the middle came to have also a passive meaning which was preserved in Greek in such forms as *ἐ-δό-θης*, *ἐ-τέ-θης*, *ἐ-κτά-θης* = Skr. *á-di-thāḥ*, *á-dhi-thāḥ*, *á-kṣa-thāḥ*. The forms of the passive voice are accordingly expressed variously in the different Indg. languages. In Greek the only passive forms distinct from the middle are the second aorist in *-ην* and the first aorist in *-θην*. The aorist in *-ην* is, as we have already seen (§ 458), originally an active athematic formation with intransitive meaning which came to be used to express the passive in Greek. This aorist in *-ην* was also an important factor in the origin and development of the aorist in *-θην* which was a special Greek new formation and probably in part of the same origin as the preterite of denominative verbs in the Germanic languages. The origin of the aorist in *-θην* is difficult to account for satisfactorily. It is probable that several factors played an important part in its origin and development. Starting out from the second person singular of the aorist middle with the secondary ending *-θης* (= Indg. *-thēs*, Skr. *-thāḥ*, § 443) which occurs in such forms as *ἐ-δό-θης*, *ἐ-τέ-θης*, *ἐ-στά-θης*, *ἐ-κτά-θης* = Skr. *á-di-thāḥ*, *á-dhi-thāḥ*, *á-sthi-thāḥ*, *á-kṣa-thāḥ*, there was formed *ἐ-δό-θην*, *ἐ-δέ-θη*, &c. : *ἐ-δό-θης* after the analogy of aorists like *ἐ-μάν-ην*, *ἐ-μάν-η*, &c. : *ἐ-μάν-ης*, thus creating a complete new aorist out of a single form. But it is improbable that the aorist in *-θην* had its origin solely in the *-θης* of forms like *ἐ-δό-θης*, &c. In part at least it was probably also a periphrastic formation which was originally confined to denominative verbs, as in *ἐ-τίμη-θην*, *ἐ-φίλη-θην*, *ἐ-δηλώ-θην*, *ἡδέσ-θην*, &c., and then at a later period became extended to primary verbs as well. In this respect it

corresponds exactly in formation with the preterite of denominative verbs in the Germanic languages, as Goth. *salbō-da*, *I anointed*, *salbō-dēs*, *salbō-da*, where *-da*, *-dēs*, *-da* = Indg. *-dhēm*, *-dhēs*, *-dhēt*, which was originally an aorist of the root **dhē-* which occurs in *τί-θη-μι*. If the assumption is right that the aorist in *-θην* was in part a periphrastic formation, there must have been a time when two types of the dual and plural existed side by side, viz. *ἐ-δό-θην* : *ἐ-δό-θημεν*, &c. and *ἐ-τίμη-θην* : **ἐ-τίμη-θε-μεν* (cp. *ἔ-θε-μεν*), &c. and that then the form *-θημεν* with *-η-* became generalized. The periphrastic formation was originally active both in form and meaning as in the Germanic languages, but in Greek it became passive in meaning through the influence of the aorists of the type *ἐδόθην*, *ἐμάνην*. The aorist in *-θην* became very productive in the prehistoric period of the language and already in Homer it was far more common than that in *-ην*. Its great expansion was doubtless due to the large mass of denominative verbs.

THE PERFECT.

§ 515. The perfect had originally certain well-defined characteristics which clearly distinguished it from the other tenses. The more important of these characteristics were :—

(a) The personal endings in the active singular, as Indg. **wóid-a*, **wóit-tha*, **wóid-e* = *οἶδ-α*, *οἶσ-θα*, *οἶδ-ε*, Skr. *véd-a*, *vét-tha*, *véd-a*. What the original endings of the dual and plural were cannot be determined, because there is little or no agreement amongst the languages which have preserved the perfect forms in historic times (see §§ 440-1). (b) Reduplication with *e* (rarely *ē*) in the reduplicated syllable. (c) A different grade of ablaut in the active singular as compared with the active dual, plural, and the whole of the middle. (d) A special participial ending (§ 552).

§ 516. The perfect generally had reduplication with *e* in the reduplicated syllable, as *δέ-δορκα* = Skr. *da-dárśa*; *πέ-πηγα* = Lat. *pe-pigī*. Beside *e* there also existed *ē* which is rare in Greek (cp. Hom. *δη-δέχεται* : *δέχομαι*) but common in Vedic. Latin and especially the Germanic languages show that unreduplicated perfects were also common in the parent Indg. language. But the reason why the perfect was originally formed partly with and partly without reduplication is unknown. The forms with reduplication became productive in Greek and Sanskrit and those without it in Latin and the Germanic languages. Already in the prim. Germanic period the old perfect active came to be used as a simple preterite and then a new periphrastic perfect was formed. What is called the perfect in Latin was a mixture of various kinds of formations, e. g. old perfects, as *tu-tudī*, *de-dī*, *vēnī*, *lēgī*; old strong aorists, as *te-tigī*, *pe-pulī*, *fidi*, *scidi*; and old *s*-aorists, as *dixī*, *lēxī*, &c. (§ 507).

Greek, Old Latin and Gothic show that the reduplicated syllable originally contained *e*, cp. O.Lat. *me-mordī*, *pe-pugī*, *te-tulī*, classical Lat. *ce-cidī*, *de-dī*, &c.; Goth. *hái-t*, *he called*, *ga-raí-rōþ*, *he reflected upon*: inf. *háitan*, *ga-rēdan*. But in classical Latin the vowel in the reduplicated syllable became assimilated to that of the root-syllable when the present and perfect had the same vowel, as *mo-mordī*, *pu-pugī*: *mordeo*, *pungo*. In Sanskrit the reduplicated syllable generally had *a* = Indg. *e* (§ 42), as *da-dárśa* = *δέ-δορκα*, but when the root-syllable contained the ablaut *ē* : *i* = Indg. *oi* : *i*; *ō* : *u* = Indg. *ou* : *u*, the vowel in the reduplicated syllable became assimilated to that in the root-syllable of the active dual and plural, and of the middle, as *ri-réca* = *λέ-λοιπα*, pl. *ri-ricimá*; *tu-tóda*, *I have pushed* = Goth. *stai-staut*, pl. *tu-tudimá*.

§ 517. In dealing with the reduplicated syllable it is necessary to distinguish between bases or stems which

began with a consonant and those which began with a vowel. When the base or stem began with a single consonant the reduplication consisted of this consonant + ε, as δέ-δορκα, λέ-λοιπα, but with dissimilation of aspirates, as πέ-φευγα, τέ-θεικα, κέ-χυμαι (§ 115). When the base or stem began with an explosive plus a nasal or liquid, the reduplication generally consisted of the explosive + ε, as πέ-πνευκα, τέ-θνηκα (with dissimilation of the aspirate), γέ-γραφα, γέ-γλυμμαι. But combinations like γν-, βλ-, ζ-, ξ-, ψ-, κτ-, πτ- generally had simply ἐ- for the reduplicated syllable, as ἔγνωκα, ἐβλάστηκα beside βεβλάστηκα, ἔζηκα, ἔξαμμαι, ἔψαλκα, ἔκτονα, ἔπταισμαι. In these and similar perfects the form of reduplication was due to the analogy of perfects like ἔσχηκα, ἔσχημαι : ἔχω. In bases or stems originally beginning with s, w; s or w + a consonant we have ἔσχηκα : ἔχω from *σεχω; ἔοικα from *φε-φοικα, ἔολπα; εἵμαρται from *σε-σμαρται, εἴληχα from *σε-σληχα, εἴληφα, εἴλοχα; εἴωθα from *σε-σφωθα, ἔσταλκα from *σε-σταλκα, ἔστηκα from *σε-στηκα; ἔρρωγα, εἴρηκα, from *φε-φρωγα, *φε-φρηκα.

In bases or stems originally beginning with a vowel the e would regularly become contracted in the parent Indg. language, but it is not certain what were the rules governing this contraction in all cases, cp. ἦχα (with prim. Greek ā) : ἄγω beside Lat. ēgī : ago; ἦσ-θα which is properly the perfect of εἰμί (§ 452). In Greek it became the rule that the perfect had a long vowel. This occurs in the perfects with the so-called Attic reduplication, as Hom. ἐδ-ηδώς : Skr. āda, Lat. ēdī; ὄδ-ωδα, ὄλ-ωλα, ὄπ-ωπα, ὄρ-ωρα, ἐλ-ήλακα, ἐλ-ήλαμαι; after the analogy of which were formed Att. ἀκ-ήκοα, ἀλ-ήλιφα, ἀλ-ήλιμμαι, ἐλ-ήλυθα, &c. This type of perfect with the so-called Attic reduplication was a special Greek new formation, and the reduplication was based on the analogy of the reduplicated presents and aorists.

§ 518. The perfect belonged to the athematic conjugation and accordingly had a difference of ablaut in the active singular as compared with the active dual, plural, and the middle. In verbs belonging to the e-series of ablaut the active singular had the strong grade *o* in the root-syllable, and the weak grade in all other forms, as *οἶδα*, Skr. *véda*, Goth. *wáit*, *I know* : pl. *ἴδ-μεν* (Att. *ἴσ-μεν*), Skr. *vid-má*, Goth. *wit-um*; *γέ-γον-α* : *γέ-γα-μεν*, *πέ-πονθα* : *πε-παθυῖα*, *τέ-τροφα* : *τε-τράφαται*. Other examples with *o* in the active singular are : *δέδορκα*, *δι-έφθορα*, *εἰλήλουθα*, *ἔκτονα*, *ἔμμορα*, *ἔοικα*, *ἔολπα*, *ἔοργα*, *ἔστροφα*, *κέκλοφα*, *κέχοδα*, *λέλογχα*, *λέλοιπα*, *πέποιθα*, *τέτοκα*. Or a long vowel in the active singular and *ə* (= Gr. *α*, § 49) in all other forms, as *λέ-ληθα* : *λέ-λασμαι*, *λέ-λασται*, *λε-λασμένος*. In the active singular the accent was originally on the root-syllable, as in Skr. *da-dársā*, *ja-jāna* beside Gr. *δέ-δορκε*, *γέ-γονε*. Sanskrit and the old Germanic languages preserved almost entirely the original distinction between the strong grade of ablaut in the active singular and the weak grade in the dual and plural, but in Greek the original distinction was in a great measure obliterated by levelling and new formations already in the oldest period of the language. Regular old forms were *οἶδα*, *ἔοικα*, *γέ-γονα*, *μέ-μονα* beside *ἴδμεν*, *ἔικτον* from **φε-φικτον*, *γέ-γα-μεν*, but *γεγόναμεν* with *-ο-* from the singular, and similarly Hom. *εἰλήλουθμεν* beside *εἰλήλυθμεν* : *εἰλήλουθα*. In nearly all other verbs either the vowel of the singular was levelled out into the dual and plural, as in *εοίκαμεν*, *λελοίπαμεν*, *πεποιθάμεν*, *τετρόφαμεν*, *ἐρρώγαμεν* : *εοικα*, *λέλοιπα*, *πέποιθα*, *τέτροφα*, *ἔρρωγα*; and similarly with a large number of other verbs. Or more rarely the vowel of the dual and plural was levelled out into the singular, as in Att. *ἐλήλυθα*, *τέτραφα*. In many verbs the perfect active had its vowel direct from the stem of the present, as *πέφευγα* for **πέφουγα* : *φεύγω*, and similarly *βέβλεφα*, *γέγραφα*,

λέλεγα, πέπλεχα, βέβριθα, γέγηθα, ἔρριγα, κέκλαγγα : κλάζω from *κλαγγῶ.

The weak grade of ablaut was mostly preserved in the middle, as δέδαρμαι, δεδαρμένος : δέρω, and similarly ἔσπαρται, πέπαρμαι, πεπαρμένος, πέπυσμαι, τέταμαι, τετράφαται, τέθραμμαι, πέφαται, πεφυγμένος, &c. But the middle had also sometimes its vowel direct from the stem of the present, as λέλειμμαι, λέλειπται, λελειμμένος : λείπω, and similarly γέγευμαι, γέγευται, τέτεισμαι, τέτεισται, Hom. τετεύχεται : τετυγμένος.

§ 519. The original inflexion of the active was fairly well preserved in a perfect like οἶδα, as

| | Greek. | Skr. | Goth. |
|----------|---------------|--------|-------|
| Sing. 1. | οἶδα | vēda | wáit |
| 2. | οἶσθα | véttha | wáist |
| 3. | οἶδε | vēda | wáit |
| Plur. 1. | ἴδμεν (ἴσμεν) | vidmá | witum |
| 2. | ἴστε | vidá | witup |
| 3. | ἴσῃσι | vidúr | witun |

On the Greek personal endings of the plural see § 441. The -σ- in ἴσμεν, ἴσῃσι from *ἴσαντι was due to levelling out of the -σ- in ἴστε, and in the dual ἴστον where it was regular (§ 110). This mode of inflexion was only preserved in a few verbs in Greek. All others had an -α- between the stem ending in a consonant and the personal ending beginning with a consonant, as λέλοιπα, λέλοιπ-α-ς, λέλοιπε, λελοίπ-α-τον, λελοίπ-α-μεν, λελοίπ-α-τε, λελοίπῃσι, cp. also the Ionic new formations οἶδ-α-ς, οἶδ-α-μεν, οἶδ-α-τε, οἶδῃσι. The most commonly accepted explanation of this -α- is that it first arose in the s-aorist (§ 507) and then became extended by analogy to the perfect. The -ασ of the second pers. sing. λέλοιπας was undoubtedly of this origin. On the discussion of other explanations which have been proposed see Brugmann, *Kurze vergl. Grammatik*, pp. 544-5.

§ 520. The κ -perfect, also called the first or weak perfect, was a Greek new formation which does not occur in the other Indg. languages. Although much has been written upon the subject, no really satisfactory explanation has ever been given of the origin of this formation. The κ is generally regarded as being a root-determinative, found in the aorists ἔ-θηκα = Lat. *fēcī* : *facio*, ἦκα = Lat. *jēcī* : *jacio*, which became productive in Greek, cp. ἔδωκα : ἔδομεν after the analogy of ἔθηκα : ἔθεμεν. Then after the analogy of these aorists were formed the perfects τέθηκα, δέδωκα, ἔστηκα : ἑσταμεν, εἶκα from **je-jeka*, Dor. ἀφ-έωκα ; πέφυκα, τέτληκα : πεφύασι, τέτλαμεν. From perfects of this type the κ -formation became extended in the first instance to all bases or stems ending in a vowel, and the κ was levelled out into the dual and plural, as τέθηκα, τεθήκαμεν (later τέθεικα, τεθείκαμεν with -ει- after the analogy of εἶκα), and similarly βέβηκα, βέβληκα, βέβρωκα, γεγάμηκα, δέδρακα, κέκμηκα, ἔγνωκα, νενέμηκα, τετίμηκα ; δέδεκα : δέδεμαι, τέτακα : τέταμαι, &c. It was afterwards extended to those verbs which in the future and s-aorist had bases or stems that came to be felt as ending in a vowel, as πέπεικα : πείσω, ἔπεισα, πείθω, and similarly ἔσπακα, ἔσπεια, τετέλεκα, &c. And then lastly in the post-Homeric period it was extended to bases and stems ending in a consonant, as ἔφθαρκα, ἔσταλκα : ἔφθαρται, ἔσταλται ; ἠγγέλκα, πέφαγκα, &c. So that in the classical period the perfect of the majority of Greek verbs was formed with the suffix -κα and the original difference of ablaut-grade between the active singular, and the dual and plural was disregarded.

§ 521. The aspirated perfect was also a Greek new formation and consisted in the aspiration of κ , γ , π , β when the perfect stem ended in one of these consonants. This new formation took place earlier in the third person of the middle than in the active. In Homer it is only found in the middle, as ἔρχαται, ἔρχατο : ἔργω ; δηδέ-

χεται : δέκομαι; τετράφαται, τετράφατο : τρέπω. With the exception of πέπομφα : πέμπω and τέτροφα : τρέπω it is not found in the active in the early classical period. From about the time of Aristophanes and Plato onwards it became more and more common, as πέπλεχα : πλέκω, ἦχα : ἄγω, βέβλεφα : βλέπω, and similarly δέδοχα, ἔπτηχα, κεκήρυχα, μέμαχα, πέπραχα, ἔξευχα, εἴλοχα, λέλεχα; βέβλαφα, ἔρριφα, κέκλοφα, κέκοφα, τέτριφα, &c. Both the middle and the active forms were analogical formations, starting out from verbs originally ending in an aspirate (χ, φ) which regularly fell together with those ending in κ, γ, π, β in all the middle forms except in the third person ending in -αται, -ατο, as γέγραμμαι, γέγραψαι, γέγραπται : τέτραμμαι, τέτραψαι, τέτραπται after the analogy of which were formed τετράφαται, τέτροφα beside γεγράφαται, γέγραφα.

§ 522. Various phonological changes took place in the middle which have already been mostly dealt with in the Phonology. When the stem ended in a labial the labial became assimilated to a following μ, as λέλειμμαι, τέτριμμαι, γέγραμμαι : λείπω, τρίβω, γράφω (§117). Stems ending in κ, χ have γ before a following -μ, as πέπλεγμαi, ἀφίγμαι, πεφύλαγμαi, τέτυγμαi : πλέκω, ἀφικνέομαι, φυλάσσω from *φυλακῶ, τεύχω. This γ was due to the analogy of forms like λέλεγμαι beside λέλεξαι, λέλεκται where γ regularly became κ before σ and τ and thus fell together in these forms with stems ending in κ, χ. Stems ending in σ and a dental generally have the endings -σμαι, -σμεθα, -σμενος with σ restored (§ 214) after the analogy of endings like -σται where the σ was regular, as ἔξεσμαι for *ἔξειμαι : ἔξεσται, and similarly ἔσπασμαι, ἔσωσμαι, τετέλεσμαι, &c. beside the regular forms ἔσωμαι (Attic inscriptions), γέγευμαι from which was formed γέγευται for *γεγευσται; λέλασμαι for *λέλαθμαι after the analogy of λέλασται : ἐλέλθα, and similarly πέπεισμαι, πέπυσμαι,

πέφρασμαι for *πέφραδμαι, cp. -πεφραδμένος. The σ was also introduced analogically into stems ending in ν or a vowel, as πέφασμαι : πέφανται, ἐξήρασμαι, ὕφασμαι, beside the regular forms ῥήσχυμαι, ὄξυμαι with assimilation of νμ to μμ (§ 150); τέτεισμαι, τέτεισται, ἔγνωσμαι, κέκλαυσμαι beside the regular forms κέκλανμένος, κέκλανται.

THE PLUPERFECT.

§ 523. The parent Indg. language had no special forms which were used exclusively to express the pluperfect. It accordingly came to be expressed differently in the different languages. Greek had two distinct formations of the pluperfect.

1. The augmented perfect forms together with secondary personal endings. In this formation the active dual and plural were athematic, but the singular was thematic after the analogy of the imperfect, as Hom. ἔστατον, ἔικτην, γεγάτην, ἐπέπιθμεν, ἐδείδιμεν, ἔσταμεν, ἔστατε, βέβασαν, ἐδείδισαν, ἔστασαν, μέμασαν, ἴσαν from *ῥίδσαν, &c., but singular Hom. ἐμέμηκον, ἐπέπληγον, ἐγέγωνε, δείδιε, &c. Middle Hom. τετύγμην, κεχόλωσο, ἐτέτακτο, ἐτέτυκτο, τετάσθην, βεβλήατο, ἡλήλατο.

2. But the usual mode of forming the active pluperfect started out originally from dissyllabic heavy bases ending in -ε in Greek (§ 458), to which were added in the singular the personal endings -α, -ας, -ε of the perfect, contracted with the -ε in Attic into -η, -ης, -ει (= Herodotus -εα, -εας, -εε); but dual -ε-τον, -ε-την, pl. -ε-μεν, -ε-τε, -ε-σαν where the -ε- belonged to the base as in ὠλώλε-μεν. The -ε then became extended to other verbs, as ἐλελοίπη, ἐλελοίπης, ἐλελοίπει; ἐλελοίπετον, ἐλελοιπέτην; ἐλελοίπεμεν, ἐλελοίπετε, ἐλελοίπεσαν. At a later period in Attic were formed the endings -ειν, -εις with ει from the third person singular, and then the ει was levelled out into the dual and plural.

NOTE.—The prim. Greek preterite to οἶδα was formed from

the stem *φειδη-* (cp. *εἰδήσω*, and Lat. *vidē-re*) with *-η-* in all forms of the tense, as **ῥ̥φειδην*, *-ης*, *-η* (Hom. *ῥ̥είδῃ*), pl. **ῥ̥φειδημεν* (= Hesych. *ῥ̥δῃμεν*). *ῥ̥δεμεν*, *ῥ̥δετε*, *ῥ̥δεσαν* were new formations after the analogy of *ἐλελοίπ-ε-μεν*, &c. The regular form of the first person singular would have been **ῥ̥δην*. The form *ῥ̥δεα*, Att. *ῥ̥δη* was either a new formation after the analogy of *λελοίπεα*, *-η* or else it was an aorist formation corresponding to a prim. Greek form **ῥ̥φειδεσα* (§ 430).

THE INJUNCTIVE.

§ 524. Beside the subjunctive there also existed in the parent Indg. language the injunctive which in appearance consisted of unaugmented indicative forms with secondary personal endings, cp. *φέρε*, *φέρετε* = Skr. *bhárat*, *bhárata*, beside the imperfect *ἔ-φερε*, *ἐ-φέρετε* = Skr. *á-bharat*, *á-bharata*; *θές*, *δός* for **θής*, **δώς* = Skr. *dhāḥ*, *dāḥ*, beside the aorist *á-dhāḥ*, *á-dāḥ*. This mood, also sometimes called the impure subjunctive, was fully developed in Vedic and was used with an indicative and subjunctive meaning, but in classical Sanskrit it was only preserved in imperative forms and in combination with the negative particle *mā* = *μῆ* to express prohibitions, as *mā kr̥thāḥ*, *do not do*, *mā dhāḥ*, *do not place*, beside the aorist *á-kr̥thāḥ*, *á-dhāḥ*. The injunctive was originally used partly with a present meaning, e.g. when the verbal form was unaccented, as in **pró bheret* beside **bhéret* = *φέρε*, partly with a past meaning, and partly also with a voluntative or future meaning. But already in the prim. Indg. period the second and third persons (except the second pers. sing. active) had become part of the imperative system in making positive commands (§ 539), as *ἔπεο*, *ἔπου* = Lat. *sequere*, Indg. **séqeso*; *φέρετε*, *φέρετον*, *φερέτων* for **φερέτᾱν* = Skr. *bhárata*, *bháratam*, *bháratām*; middle *φέρεσθε*, *φέρεσθον*, *φερέσθων*. In Sanskrit and prim. Greek the

second pers. sing. of the aorist active also came to be used for the imperative, as dhāḥ , dāḥ = $\theta\acute{\epsilon}\varsigma$, $\delta\acute{o}\varsigma$, and similarly $\acute{\epsilon}\varsigma$, $\acute{\epsilon}\nu\iota\text{-}\sigma\pi\epsilon\varsigma$, $\sigma\chi\acute{\epsilon}\varsigma$, &c.

THE SUBJUNCTIVE.

§ 525. The original subjunctive, also called conjunctive, was preserved in Greek, Latin and Vedic, but in classical Sanskrit it had practically disappeared and its place was taken by the optative. It was also supplanted by the optative in the prehistoric period of the Germanic and Baltic-Slavonic languages. The original personal endings were partly primary and partly secondary. In the parent Indg. language the subjunctive was formed in various ways according as the stem of the indicative ended in (a) a consonant or (b) in $\cdot e$, $\cdot o$ (dissyllabic light bases) or (c) in a long vowel (monosyllabic and dissyllabic heavy bases).

§ 526. Type (a). The subjunctive to indicative stems ending in a consonant had the characteristic formative element $\cdot e$, $\cdot o$. The $\cdot e$, $\cdot o$ was doubtless of the same origin as the $\cdot e$, $\cdot o$ in the present and strong aorist of the thematic verbs, as $\lambda\acute{\epsilon}\iota\pi\omicron\text{-}\mu\epsilon\nu$, $\lambda\acute{\epsilon}\iota\pi\epsilon\text{-}\tau\epsilon$, $\acute{\epsilon}\lambda\acute{\iota}\pi\omicron\text{-}\mu\epsilon\nu$, $\acute{\epsilon}\lambda\acute{\iota}\pi\epsilon\text{-}\tau\epsilon$, so that the subjunctive of this type was the same in form as the present indicative of the thematic verbs. To this type belong presents and strong aorists like $\acute{\epsilon}\omega$, $\tilde{\omega}$ = Lat. fut. *ero*, Indg. **esō*, Hom. $\iota\omicron\mu\epsilon\nu$: indic. $\acute{\iota}\mu\epsilon\nu$, $\acute{\alpha}\lambda\epsilon\tau\alpha\iota$: $\acute{\alpha}\lambda\tau\omicron$, $\phi\theta\acute{\iota}\epsilon\tau\alpha\iota$, $\phi\theta\acute{\iota}\omicron\mu\epsilon\sigma\theta\alpha$: $\phi\theta\acute{\iota}\tau\omicron$; the verbs $\acute{\epsilon}\delta\omicron\mu\alpha\iota$, $\pi\acute{\iota}\omicron\mu\alpha\iota$, $\chi\acute{\epsilon}\omega$, &c. which came to be used as futures (§ 498). *s*-aorists, common in Homer and his imitators, as $\acute{\alpha}\lambda\gamma\acute{\eta}\sigma\epsilon\tau\epsilon$, $\acute{\alpha}\gamma\epsilon\acute{\iota}\rho\omicron\mu\epsilon\nu$, $\beta\acute{\eta}\sigma\omicron\mu\epsilon\nu$, $\tau\acute{\epsilon}\lambda\omicron\sigma\omicron\mu\epsilon\nu$, $\acute{\alpha}\mu\acute{\epsilon}\lambda\psi\epsilon\tau\alpha\iota$, Ion. $\pi\omicron\iota\acute{\eta}\sigma\epsilon\iota$, Cret. $\delta\acute{\epsilon}\iota\kappa\sigma\epsilon\iota$, $\omicron\mu\acute{o}\sigma\epsilon\iota$; fut. $\acute{\alpha}\acute{\xi}\omega$, $\omicron\acute{\iota}\sigma\omega$, $\delta\psi\omicron\mu\alpha\iota$ (§ 499); the imperatives $\acute{\alpha}\acute{\xi}\epsilon\tau\epsilon$, $\omicron\acute{\iota}\sigma\epsilon$, $\delta\psi\epsilon\sigma\theta\epsilon$, $\lambda\acute{\epsilon}\xi\epsilon\omicron$, &c. Perfects like Hom. $\acute{\epsilon}\acute{\iota}\delta\omicron\mu\epsilon\nu$, $\acute{\epsilon}\acute{\iota}\delta\epsilon\tau\epsilon$: $\omicron\acute{\iota}\delta\alpha$, but $\acute{\epsilon}\acute{\iota}\delta\omega$ from **φειδεσω*, $\pi\epsilon\pi\omicron\acute{\iota}\theta\omicron\mu\epsilon\nu$.

From the time of Homer onwards the $\cdot e$, $\cdot o$ began to be supplanted by $\cdot\eta$, $\cdot\omega$ in all tenses except in those forms

which became used for the future and imperative. This change in Greek as in other Indg. languages was doubtless due to the fact that the latter was a more distinctive formation of the subjunctive, cp. *ἵωμεν* beside Hom. *ἰόμεν*, *τείσωμεν*, *πεποιθώμεν*, &c.

§ 527. Type (b). The subjunctive to thematic indicative stems (dissyllabic light bases) had in Greek *-η-*, *-ω-* corresponding to the *-ε-*, *-ο-* of the indicative. It is uncertain whether this *-η-* and *-ω-* existed in the parent Indg. language or whether the *-η-* alone belonged originally to all forms of the subjunctive. So far as Greek is concerned the *-η-*, *-ω-* might be a contraction of the *-ε-*, *-ο-* in dissyllabic light bases like *φερε-*, *φερο-* with the *-ε-*, *-ο-* which occurs in the subjunctive of type (a), but this explanation does not account for the long *-ā-* in forms like Lat. *ferā-mus*, *ferā-tis* beside the fut. *ferē-mus*, *ferē-tis*. Sanskrit unfortunately throws no light upon this difficult point, because in this language Indg. *ē*, *ō*, *ā* all fell together in *ā* (§ 42). It is, however, far more probable that the *-η-* originally belonged to all forms of the singular, dual and plural, and that **φέρην*, **φέρημεν*, **φέρηντι* then became *φέρω*, *φέρωμεν*, *φέρωντι* (*φέρωσι*) after the analogy of the present indic. *φέρω*, *φέρωμεν*, *φέρουντι* (*φέρουσι*). This *-η-* had its origin in dissyllabic heavy bases ending in *-ē* (§ 458), cp. subj. *ἴδη-τε* : Lat. *vidē-te*, *πίθη-ται* : *πεπιθή-σω*, *βάλῃ* : *ἔβλη-ν*, and it is probable that the whole formation originally started out from the injunctive forms of the strong aorist of such bases as regularly had *η* in all forms of the singular, dual and plural (§ 528). And in like manner the *ā*, which occurs in Latin, Keltic and the Slavonic languages, probably started out from the injunctive forms of dissyllabic bases ending in *-ā* (§ 458). The inflexion of type (b) in Vedic was sing. *bhārā-ni*, *bhārā-s(i)*, *bhārā-t(i)*, pl. *bhārā-ma*, *bhārā-tha*, *bhārā-n*, but in Greek *φέρω*, *φέρης*, *φέρη*, *φέρω-μεν*, *φέρη-τε*, *φέρω-ντι* (*φέρω-σι*), where *φέρης*, *φέρη* from older

φέρη-εις*, **φέρη-ει* had *ει* from the endings of the present indicative. The regular forms would have been **φέρη-ς*, **φέρη*. For *φέρω-ντι* (*φέρω-σι*) we should have expected **φέρο-ντι* (φέρουσι*) with shortening of the *-ω-* (§ 70), but either the *-ω-* was introduced into the third person plural after the law for the shortening of long vowels in this position had ceased to operate, or else it was re-introduced from *φέρω-μεν* in order to preserve the distinction between the subjunctive and indicative.

In like manner was formed the subjunctive of denominative verbs from vocalic stems, as *τιμάωμεν*, *τιμάητε*, *φιλέωμεν*, *φιλέητε*, Att. *τιμῶμεν*, &c. The contracted forms of the subjunctive and indicative of *τιμάω* regularly fell together in Attic in the second and third persons singular, and then after the analogy of these the indicative forms *δηλοῖς*, *δηλοῖ* also came to be used for the subjunctive of *δηλόω*.

§ 528. Type (c). The subjunctive to indicative stems ending in a long vowel. Here a distinction must be made according as the final long vowel of the indicative stem originally belonged (1) to all forms of the singular, dual and plural or (2) belonged only to the active singular. The regular old subjunctive forms of (1) were preserved in some Doric dialects, as Mess. *γράφηντι* beside Att. *γράφωσι*, Heracl. *οικοδόμηται* : indic. *οικοδομεῖται*, Cret. *πέπᾱται*, Ther. *πέπρᾱται*. But already in Homer the original forms were remodelled after the analogy of types (a) and (b), as *δαμήω*, *δαμήετε* : *ἐδάμην*, *τραπήομεν* : *ἐτράπην*, *γνώομεν* : *ἔγνων*, &c. beside *δαμήης*, *φανήη*, *γνώη*, *γνώωσι*, &c. Prim. Greek had in (2) the long vowel in all forms, but it cannot be determined what were the original Indg. forms of the dual and plural active and of the middle. A few such forms have been preserved in various dialects, as Cret. *δύνᾱμαι*, *νύνᾱται*, *νύνᾱντι*, *ἰθῶᾱντι* = *ἰστᾱντι*, Mess. *προ-τίθηντι*, Arcad. *ἐπισυν-ίστᾱτοι*, *δέᾱτοι* (§ 444), &c. But already in Homer the prim. Greek forms

were also here remodelled after the analogy of types (a) and (b), as *δώμεν, θήμεν, στήμεν, στήετον*, and with quantitative metathesis, Hom. *θέωμεν, στέωμεν*, &c. (§ 72), beside *δώσι(ν), στήωσι, δώσι(ν), στήης, θήη*, &c. Attic regularly has the contracted forms, as *διδῶ, διδῶς, διδῶ, διδῶμεν, διδῶτε; τιθῶ, τιθῆς, τιθῆ, τιθῶμεν, τιθῆτε*, &c.

§ 529. In some verbs Attic and Ionic had new formations in the middle. After the analogy of *φέρωμαι : φέρηται* was formed *τίθωμαι : τίθηται*. After *ā* had become *η* in Attic and Ionic (§ 51) we then also have *ἐπίστωμαι : ἐπίσσηται*, and similarly *δύνωμαι, κρέμωμαι, μάρνωμαι*. The circumflex in *τιθῶμαι, διδῶμαι, ἰσθῶμαι* was due to the analogy of the active.

THE OPTATIVE.

§ 530. The optative was originally formed in two ways according as the corresponding tense-stems of the indicative were athematic or thematic. The optative to the athematic indicative stems had the formative element *·(i)jē·, ·ī·* where *·ī·* was the weak grade of *·jē·* (§ 90), and the optative to thematic indicative stems had *·ī·* which combined with the thematic vowel *·o·* to form the diphthong *·oi·*. Both types of optatives had secondary personal endings.

§ 531. In the first type of optative the active singular had *·(i)jē·* and all other forms of the active and the whole of the middle had *·ī·* before endings beginning with a consonant, but *·(i)j·* before endings beginning with a vowel. In the active singular the accent was on the *·ē·*, but in all other forms on the personal endings, and the stem had accordingly the weak grade of ablaut. The weak form of the stem was however generally supplanted by the strong form already in prim. Greek, i.e. the optative came to be made direct from the strong grade form of the stem. The original manner of forming this type of the optative was only preserved in the historic period of the language when the stem originally

ended in a vowel or came to end in a vowel after the loss of intervocalic -σ- (§ 213, 2), as *στα-ίνην*, *θε-ίνην* ; *ε-ίνην*, *ε-ἴμεν* . from **έσ-γήν*, **έσ-ἴμεν* ; *εἶδε-ίνην*, *εἶδε-ἴμεν* from **φειδεσ-γήν*, **φειδεσ-ἴμεν*. The original inflexion of *εἴην* was :—

| | Indg. | Gr. | Skr. | O.Lat. |
|----------|---------------------|-------|--------|--------|
| Sing. 1. | *s-(i)jé-m | εἴην | syám | siem |
| 2. | *s-(i)jé-s | εἴης | syáh | siēs |
| 3. | *s-(i)jé-t | εἴη | syát | siet |
| Plur. 1. | *s-ī-m ¹ | εἴμεν | syáma | sīmus |
| 2. | *s-ī-té | εἴτε | syáta | sītis |
| 3. | *s-(i)j-ént | εἴεν | [syúr] | sient |

In Greek the stem had the strong grade of ablaut which occurs in *έσ-τί*, so that the prim. Greek forms were **έσ-γή-ν*, **έσ-γή-ς*, **έσ-γή-(τ)*, pl. **έσ-ἴ-μέν*, **έσ-ἴ-τέ*, **έσ-ἴ-έν(τ)*. From the time of Homer onwards the -ιη- of the singular became levelled out into the dual and plural, as *εἴητον*, *εἴητην*, *εἴημεν*, *εἴητε*, *εἴη-σαν*, and similarly *σταίημεν*, *θείημεν*, *δοίημεν*. A similar levelling out of the -yā- also took place in the prehistoric period of Sanskrit, as *syáma* for **sīmá*, whereas in classical Latin the -ī- of the plural was levelled out into the singular, as *sim*, *sīs*, *sit*, and similarly in prim. Germanic, as in Old High German *sī*, *sīs*, *sī*, pl. *sīm*, *sīt*, *sīn*.

But the optative to indicative stems ending in a consonant came to be formed after the analogy of the thematic type already in prim. Greek, as *λε-λοίπ-οι-μι*, *λε-λοίπ-οι-μεν* : *λέ-λοιπ-α* ; *δείξ-αι-μι*, *δείξ-αι-μεν*, *δείξ-αι-το* : *ἔ-δειξ-α* ; *λύσ-αι-μι*, *λύσ-αι-μεν* : *ἔ-λῦσ-α* ; cp. on the other hand Skr. *vid-yā-t* : indic. *véd-a* = *οἶδε* ; *ri-ric-yā-t* : indic. *ri-réc-a* = *λέ-λοιπ-ε* ; third pers. sing. of the s-aorist middle *dikṣ-i-ta* : indic. *á-dikṣ-i*, cp. Lat. *dix-i-mus*.

§ 532. The regular optative to dissyllabic heavy bases, which had a long vowel in the second syllable of all forms of the indicative, was in prim. Greek **δρᾶζην*, **γνῶζην*, pl.

*δραῖμεν, *γνῶιμεν : indic. ἔδρᾱν, ἔγνων, pl. ἔδρᾱμεν, ἔγνωνμεν, which would regularly have become *δρᾱν, *γνῶν (§ 128), pl. *δραιμεν, *γνοιμεν with shortening of the long vowel (§ 63). The historic forms δραῖν, γνῶν were new formations either after the analogy of θείν, δοίην, σταίην or else with αι, οι from the plural *δραιμεν, *γνοιμεν; and similarly ἀλοίην, βαλείην, βλείην, γηραίην, κιχείην, φανείην, &c. The circumflex in the pl. δραῖμεν, γνῶιμεν, ἀλοῖμεν, βαλεῖμεν, βλεῖμεν, κιχείμεν, φανείμεν, &c. as also in forms like τιθείμεν, θεῖμεν (§ 533) has never yet been satisfactorily explained, see Brugmann, *Griech. Grammatik*, third ed., p. 338.

§ 533. The optative to monosyllabic heavy ablaut-bases had the weak form of the base, as τι-θε-ίη-ν, θε-ίη-ν, pl. τι-θείμεν, θεῖμεν : indic. τί-θη-μι, τί-θε-μεν. The ι in the sing. θείην, &c. was either due to levelling out of the ι of the dual and plural (except the third person which was also a similar new formation) into the singular or else it represented Indg. -ij-, as *dhə-ijē-m corresponding to Sanskrit dhēyām. An Indg. form *dhə-jē-m would have become *θην in Greek. The circumflex in θεῖμεν, τιθείμεν, θεῖτο, τιθεῖτο presents the same difficulty as in δραῖμεν for *δραῖμεν (§ 532); and similarly διδοίην, δοίην (Skr. dēyām), ἰσταίην, σταίην (Skr. sthēyām), φαίην, pl. διδοῖμεν, δοῖμεν, ἰσταῖμεν, σταῖμεν, φαῖμεν; pf. ἑσταίην, ἑσταῖμεν, τεθναίην. In Herodotus and later Attic the -ιη- of the active singular was levelled out into the dual and plural, as θείημεν, δοίημεν, σταίημεν (cp. § 531).

§ 534. The original formation of the optative to dissyllabic heavy ablaut-bases was not preserved in Greek. The original optatives of this type were remodelled after the analogy of the thematic type, as κρέμαιτο : indic. κρέμαται; δεικνύοιμι, δεικνύοιμεν, δεικνυοίμην, δεικνυοίμεθα, the optative to presents in -νύμι would regularly have had *-νυ(j)ην, pl. *-νυφιμεν, cp. Skr. ṛ-ṇu-yā-t, middle ṛ-ṇu-

ī-tá : indic. ῑ-ῥῶ-ti, *he moves* ; μαρνοίμην, μαρνοίμεθα : indic. μάρναται, δύναιτο : indic. δύναται, cp. Skr. middle ṣṛ-ṇī-tá : indic. ṣṛ-ṇā-ti, *he breaks in pieces*.

§ 535. The Greek optative to the s-aorist was a new formation after the analogy of the thematic type, as in λύσαιμι, λύσαις, λύσαι ; λύσαιτον, λύσαίτην ; λύσαιμεν, λύσαιτε, λύσαιεν ; middle λῦσαίμην : ἔ-λῦσ-α, ἐ-λῦσ-ά-μην, where the -α- of the s-aorist indicative (§ 507) came to be regarded as a thematic vowel like the -ο- in φέροιμι, φεροίμην ; and similarly δείξαιμι, δείξαιμεν, δειξαίμην : ἔ-δειξ-α, ἐ-δειξ-ά-μην, φήναιμι, φήναιμεν, φηναίμην : ἔ-φην-α from *ἔ-φαν-σα, &c.

The so-called Aeolic optative of the s-aorist which occurs in Homer and Attic was also a Greek new formation with reduplication of the s-element of the aorist and with ε from the original s-aorist of the subjunctive, as δείξειαις, δείξειε, third pers. pl. δείξειαν from *δεικσεσαν, and similarly in Lat. dixerim, dixerimus beside the regular old forms dixim, diximus.

§ 536. The optative to thematic indicative stems had originally -ī- which combined with the thematic vowel -ο- to form the diphthong -oi-, but -oj- before endings beginning with a vowel. This type of optative was preserved in Greek, Sanskrit and also in the old Germanic languages, but with the function of the subjunctive, whereas in Latin it disappeared already in the prehistoric period of the language. The original inflexion of this type of optative was :—

| | Indg. | Gr. | Skr. | Goth. |
|----------|--------------|----------|----------|----------|
| Sing. 1. | *bhéroj-m | φέρειμι | bhárēyam | baíráu |
| | *bhérois | φέρεις | bhárēh | baíráis |
| | *bhérois-t | φέρει | bhárēt | baírái |
| Dual 2. | *bhérois-tom | φερόιτον | bhárētam | |
| | *bhérois-tām | φερόιτην | bhárētām | |
| Plur. 1. | *bhérois-m | φεροίμεν | bhárēma | baíráima |
| | *bhérois-te | φεροίτε | bhárēta | baíráip |
| | *bhéroj-nt | φείροιεν | bhárēyur | baíráina |

The regular forms of the first pers. singular and the third pers. plural were not preserved in the historic period of any of the languages. Both forms would regularly have become *φέρω from older *φέρωja. φέροιμι had the stem φέροι- from the other persons where it was regular and -μι after the analogy of the athematic presents, and similarly φέροι-εν with -εν from the optative of the athematic type (§ 531). And in like manner both forms would regularly have become *bhārāya in Sanskrit, but the stem bhārēy- had -ē- from the other forms.

§ 537. In the -έω class of contract verbs the optative plural φιλέοιμεν, &c. regularly became contracted into φιλοῖμεν, &c., and thus fell together with the athematic type διδοῖμεν. And then after the analogy of διδοῖν : διδοῖν from φιλοῖμεν a new singular φιλοῖν was formed, and at a later period the -οῖν- of the singular was levelled out into the dual and plural. After the analogy of the optative of this type were also formed new optatives to the contract verbs in -άω, -όω.

§ 538. The prim. Greek forms of the middle were *φεροιμᾶν, *φεροισο, *φεροιτο (= Skr. bhārēta); *φεροισθον, *φεροισθᾶν; *φεροιμεθα, *φεροισθε, *φεροιατο (= Indg. *bhérojnto), on the personal endings see §§ 442-8. *φεροιατο would regularly have become *φερωτο. φέροινο was a new formation with the stem φέροι- from the other forms and the ending -ντο from forms like ἐ-φέροντο. The old ending -ατο is found in Homer, Herodotus and the Attic dramatists in the combination -οι-ατο where -οι- was from the other forms.

THE IMPERATIVE.

§ 539. Already in the parent Indg. language the imperative system was made up of several distinct formations which included (a) injunctive forms, as φέρετε, Skr. bhārata; (b) forms with the bare stem, as φέρε, Skr. bhāra, ἔξ-ει, Lat.

ex-i; and (c) compound forms, as *ἴσ-θι*, *ἴσ-τω* = Skr. **vid-dhí**, **vit-tād**. It had injunctive forms for the second person singular of the middle, the second person plural of the active and middle, and the second and third person dual of the active and middle, as *ἔπεο* = Lat. **sequere**; *φέρετε*, *φέρεσθε*; *φέρετον*, *φερέτων* for older **φερέτᾱν* after the analogy of *φερέτω*, *φέρεσθον*, *φερέσθων*, see § 524. To these were added in prim. Greek the injunctive forms of the second aorist active, as *εἶσ-φρες*, *ἔκ-φρες*, *ἐνί-σπες*, *σχές*, *θές*, *δός*, *ἔς*, &c. (§ 524). The active forms of the injunctive require no further comment and will therefore be omitted in the following paragraphs.

1. The Active.

§ 540. The second person singular was expressed (a) by the bare stem, as *φέρε*, Skr. **bhára**, Goth. **baír**; *ἄγε*, Lat. **age**; *βάσκει*, Skr. **gáccha**; *τίμα*, *φίλει*, *δῆλου*, from *τίμας*, *φίλες*, *δῆλοες*; *τέλει* from **τελεσje*, *φαῖνε* from **φανje*; aorists like *εἰπέ*, *έλθέ*, *εὔρέ*, *ιδέ*, *λαβέ* beside *λίπε*, &c., where the former preserved the old accent when such imperatives were originally used at the beginning of the sentence, and the latter represented the original enclitic form (§ 38). *ἔξ-ει*, Lat. **ex-i**: *εἶ-σι*, *ἴστη*: *ἴστη-σι*, and similarly *δείκνῳ*, *κρήμνη*, Lesb. *πῶ* beside *πῶ-θι*. At a later period the *-ε* in *φέρε*, &c. came to be regarded as an ending and was then extended to athematic verbs, as *καθ-ίστα* from **-ίσταε*, *τίθει* from **τίθεε*, and similarly *δίδου*, *κατά-βᾶ*, *ῥμνυε*, &c.

(b) By the addition of the accented adverbial particle **-dhí** (= Skr. **-dhí**, later **-hí**) to athematic stems. This formation only occurs in Greek, Aryan and the Baltic-Slavonic languages, but the fact that the stem had the weak grade of ablaut shows that it was very old. Examples are *ἴ-θι*, Skr. **i-hí**: *εἶ-σι*, Skr. **é-ti**; *ἴσ-θι* from **φιθ-θι*, Skr. **vid-dhí**; *κλῦ-θι*, Skr. **śru-dhí**; *πῖ-θι* beside *πῶ-θι*, Skr. **pā-hí**. Heavy

ablaut-bases, as $\phi\acute{\alpha}\text{-}\theta\iota$: $\phi\eta\text{-}\sigma\acute{\iota}$, $\acute{\epsilon}\lambda\alpha\text{-}\theta\iota$ from $*\sigma\iota\text{-}\sigma\lambda\alpha\text{-}\theta\iota$, $\delta\rho\nu\text{-}\theta\iota$, perfects $\acute{\epsilon}\sigma\tau\alpha\text{-}\theta\iota$, $\kappa\acute{\epsilon}\kappa\lambda\upsilon\text{-}\theta\iota$, $\tau\acute{\epsilon}\tau\lambda\alpha\text{-}\theta\iota$, $\tau\acute{\epsilon}\theta\nu\alpha\text{-}\theta\iota$, Hom. $\delta\epsilon\acute{\iota}\delta\iota\text{-}\theta\iota$ from $*\delta\epsilon\delta\phi\iota\text{-}\theta\iota$. Heavy bases with a long vowel (§ 458), as $\gamma\nu\hat{\omega}\text{-}\theta\iota$, $\tau\lambda\hat{\eta}\text{-}\theta\iota$, $\phi\acute{\alpha}\nu\eta\text{-}\theta\iota$. After the analogy of second aorists like $\tau\lambda\hat{\eta}\text{-}\theta\iota$, $\phi\acute{\alpha}\nu\eta\text{-}\theta\iota$ it was added to the new first aorist passive (§ 514) with dissimilation of the θ after the preceding aspirate, as $\lambda\epsilon\acute{\iota}\phi\theta\eta\text{-}\tau\iota$, $\lambda\acute{\upsilon}\theta\eta\text{-}\tau\iota$, &c. At a later period such imperatives were also formed from the strong grade stem of heavy ablaut-bases, as $\acute{\epsilon}\lambda\eta\text{-}\theta\iota$ beside the regular form $\acute{\epsilon}\lambda\alpha\text{-}\theta\iota$, $\pi\hat{\omega}\text{-}\theta\iota$ beside $\pi\hat{\iota}\text{-}\theta\iota$, $\sigma\tau\hat{\eta}\text{-}\theta\iota$, Hom. $\delta\acute{\iota}\delta\omega\text{-}\theta\iota$, &c.

The ending $-\text{ον}$ of the second person singular of the s-aorist $\delta\epsilon\acute{\iota}\xi\text{-}\text{ον}$, $\lambda\upsilon\sigma\text{-}\text{ον}$, $\phi\hat{\eta}\nu\text{-}\text{ον}$: $\acute{\epsilon}\text{-}\delta\epsilon\acute{\iota}\xi\alpha$, $\acute{\epsilon}\text{-}\lambda\upsilon\sigma\alpha$, $\acute{\epsilon}\text{-}\phi\eta\nu\alpha$, has never been satisfactorily explained.

NOTE.—Att. $\pi\acute{\iota}\epsilon\iota$ (also extended to $\pi\acute{\iota}\epsilon\iota\text{-}\varsigma$ after the analogy of injunctive forms like $\sigma\chi\acute{\epsilon}\varsigma$), $\delta\acute{\iota}\delta\omicron\iota$ (Pindar), and Dor. $\acute{\alpha}\gamma\epsilon\iota$ probably contain the deictic particle $\acute{\iota}$ which occurs in such forms as $\omicron\acute{\upsilon}\tau\omicron\sigma\text{-}\acute{\iota}$, $\nu\acute{\upsilon}\nu\text{-}\acute{\iota}$ (§ 411).

§ 541. In Greek the third person singular was formed by the addition of $-\tau\omega$ to the bare stem. This $-\tau\omega$ (=Skr. $-\acute{t}\acute{a}\acute{d}$, Lat. $-\acute{t}\acute{o}$, Indg. $*\acute{t}\acute{o}\acute{d}$) was not originally a personal ending, but simply the ablative singular of the neuter demonstrative pronoun $*\acute{t}\acute{o}\acute{d}$ (=Gr. $\tau\acute{o}$, Skr. $\acute{t}\acute{a}\acute{d}$, Lat. is-tud , Engl. **that**) used adverbially with the meaning *from that time, after that, then*. The combination was originally used to express the second and third persons of all numbers, but already in prim. Greek it became restricted to the third person singular, and in Latin to the second and third person singular, whereas in Vedic it was almost exclusively restricted to the second person singular, but it also occurred occasionally for the third person singular, and the second person dual and plural. In Vedic it had the function of a kind of future imperative, expressing an injunction

which was to be carried out at a time subsequent to the present. Originally the *-tōd* had the principal accent and the stem of ablaut-bases had the weak grade of ablaut, as *ἴσ-τω* from **φιτ-τω*, Skr. *vit-tād*, *δό-τω*, Lat. *da-tō*, Skr. *dat-tād*, and similarly *διδότω*, *τιθέτω*, *ιστάτω*, *ἴτω*, *φάτω*, *δμνύτω*, *δαμνάτω*, *δράτω*, *γνώτω*, &c. ; perfects like *ἑστάτω*, *τεθνάτω*, *μεμάτω*, Lat. *mementō*. This formation was probably confined originally to athematic verbs, but it must have been extended to thematic verbs at a very early period as is shown by examples like *φερέτω*, *εἰπέτω*, Lat. *vehitō* beside Skr. *bharatād*, *vōcatād*, *vahatād*, *ἀγέτω* beside Lat. *agitō*.

§ 542. The third person plural. The restriction of the formation with *-tōd* to the third person singular in prim. Greek gave rise to several new formations for expressing the third person plural. The exact chronological order in which these new formations took place cannot be determined with certainty. The oldest type seems to be *φερόντω* which occurs in Doric, Boeotian and Arcadian. This type probably arose in prim. Greek by the addition of *-τω* to the injunctive form **φερον*, cp. the similar formation in Lat. *ferunt-ō*. From *φερόντω* was formed *φερόντων* by the addition of the secondary plural ending *-ν* of the third person. The type *φερόντων* occurs in Homer, Attic, Ionic and some Doric dialects, and was the only good one in Attic until Aristotle's time. The type *ἔστων*, *ἴτων*, &c., which occurs in Homer, Attic, and Ionic (on inscriptions), arose from the pluralizing of the singular by the addition of *-ν*, cp. the similar process in Latin *agitō-te* with *-te* after the analogy of *agi-te*. After the analogy of forms like *ἑδίδοσαν* : *ἔδιδον* was formed the type *φερόντωσαν* : *φερόντων*, which is found on Attic inscriptions of the fourth century B. C. And then lastly arose the type *φερέτωσαν*, *διδότωσαν* from a pluralizing of the singular by the addition of the plural ending *-σαν*. This type occurs in Attic prose

since the time of Thucydides and on Attic inscriptions from 300 B. C. onwards and also on inscriptions in the later Doric and North-Western dialects.

2. The Middle.

§ 543. For the second person singular of the present and second aorist the injunctive forms were used, as *ἔπεο*, *ἔπον* from **ἔπεσο* = Lat. *sequere*, and similarly *λείπου*, *λιποῦ*, *θοῦ*, *δοῦ*, &c. In forms like *τίθεσο*, *δίδοσο*, *ἵστασο*, *δείκνυσο* the -σ- was restored after the analogy of the other forms, *τιθέσθω*, &c.

The second person singular of the s-aorist *δείξαι*, *λύσαι*, *φῆναι* from **φανσαι*, &c. is difficult to account for, because this form does not occur in any of the other languages. Most scholars are inclined to regard it as being originally the active infinitive which came to be used for the imperative through the influence of the personal ending -(σ)αι (as in *φέρεαι*, *τίθεσαι*) of the second person singular of the present indicative, cp. also the Latin passive imperative plural *legi-minī* which in form corresponds to the infinitive *λεγέ-μεναι* (§ 546).

§ 544. The other forms of the middle contain the element -σθ- which is of the same origin as in the infinitive *φέρεσθαι*, *τίθεσθαι*, &c., but in other respects they have the same endings as the active. In prim. Greek the form *φερέσθω* arose beside the active form *φέρέτω* after the analogy of *φέρεσθε* : *φέρετε*. The history and development of the middle forms of the third person plural went parallel with those of the active, but with regular loss of the -ν- in the combination -νσθ- (§ 153), cp. *φερέσθων*, *τιθέσθων* beside the active *φερόντων*, *τιθέντων*.

THE INFINITIVE.

§ 545. The infinitives of the Indg. languages were originally isolated singular case-forms of nomina actionis, and as with other kinds of nouns the case-form used depended upon the construction of the sentence. Such isolated forms became associated with the verb as soon as they were no longer regarded as being connected with the declension of the type to which they originally belonged. This isolation took place with some nomina actionis already in the parent Indg. language. The original Indg. nomina actionis were best preserved in the Aryan, Old Germanic and Baltic-Slavonic languages, whereas in Greek and Latin they became in a great measure associated with the verbal system. The infinitive being a noun in form had originally nothing to do with the distinction between active, passive, and middle. The association of particular forms to particular voices took place at a much later period.

As there were in the parent Indg. language a large number of suffixes which were used to form nomina actionis, there are accordingly a large number of different forms of the infinitive in the separate languages, cp. Lat. *regere* from **reges-i*; Goth. OE. *nim-an*, to take; Lith. *dū-ti*, O.Slav. *da-ti*, to give; Vedic *yúdh-am*, to fight, *át-tum*, to eat, *yujé*, to yoke, *dā-man-ē* (Hom. *δό-μεν-αι*), *dā-ván-ē*, to give, *át-tav-ē*, to eat, *sak-śán-i*, to abide. Of all these and various other Vedic forms only the one in *-tum*—identical with the Latin supine in *-tum*—was preserved in classical Sanskrit. In Vedic the case-form of the infinitive could be the accusative, dative, locative, and ablative-genitive. In classical Sanskrit and the Old Germanic languages the case-form was restricted to the accusative, in Latin to the dative, locative and accusative

(= the supine in *-tum*), and in Greek to the dative and locative. Datives were the infinitives in *-μεναι, -ναι, -έναι, -σαι, -σθαι*, and locatives those in *-μεν, -ειν, &c.*

1. Datives.

§ 546. *-μεναι* is the dative ending of a *-μεν*-stem (§ 345). This form only occurs in Homer and the Lesbian dialect and was originally confined to athematic verbs, as Hom. *δόμεναι*, Ved. *dāmanē*, *ἴδμεναι*, Ved. *vidmánē*, and similarly *γνώμεναι*, *ἔδμεναι*, *ζευγνύμεναι*, *θέμεναι*, *ἑστάμεναι*, *τετλάμεναι*; and then later extended to thematic verbs, as Hom. *αἰδέμεναι*, *ἀξέμεναι*, *εἰπέμεναι*; *λεγέμεναι* which corresponds in form to the Latin second person plural of the passive imperative (*legimini*).

The dative ending *-ναι* in Attic, Ionic, Arcadian and Cyprian probably arose from older *-μναι* where *-μν-* was the weak grade form of *-μεν-* (§ 273) and which became simplified to *-ν-* after long vowels (§ 146), as *ἀῆ-ναι*, *γνῶ-ναι*, *δῦ-ναι*, *στῆ-ναι*, beside *ἀή-μεναι*, *γνώ-μεναι*, *δύ-μεναι*, *στή-μεναι*. The *-ναι* then came to be used after short vowels and supplanted the old locative ending in *-μεν* (§ 549), as *δεικνύναι*, *διδόναι*, *ιστάναι*, *φάναι*, *τιθέναι*, *τεθνάναι*.

After the analogy of *-μεναι* (*δόμεναι*, &c.) : *-έμεναι* (*λεγέμεναι*, &c.) to *-ναι* a new ending *-έναι* was formed which became productive especially in the perfect infinitive, as *εἰδέναι*, *δεδιέναι*, *ὀλωλέναι*, *γεγραφέναι*, *λελοιπέναι*, *γεγονέναι*, &c. In Cypr. *δοφεναι*, Att. *δοῦναι* it is doubtful whether the *f* belongs to the stem or to the suffix, cp. also Ved. *dāvánē*.

§ 547. The infinitive of the s-aorist *δεῖξαι*, *λῦσαι*, *φῆναι*, &c. is an old dative of an s-stem which became associated with the verbal system after the analogy of *ἔδειξα* and the participle *δείξας*. It corresponds in form to Vedic infinitives like *jiṣ-ē*, *to conquer*, *stuṣ-ē*, *to praise*, and to the Latin

passive infinitive *darī* from **das-ai*, cp. also *τιμῆσαι*, *φιλῆσαι* beside Lat. *amārī*, *habērī*.

§ 548. The ending of the middle infinitive in *-σθαι* is probably related to the Vedic infinitives in *-dhyāi*, *-dhyē*, as in *dhiyá-dhyāi*, *to deposit*, *gamá-dhyē*, *to go*, beside which there was originally a form in *-dhē* corresponding to Greek *-θαι*. The origin of the formation of this type of infinitive is uncertain. The most commonly accepted theory is that it was a compound consisting of an *es*-stem, as in *εἶδεσ-* : *εἶδος* (§§ 279, 364), and the dative of a root-noun **dhē-*, **dh-* : *τί-θη-μι*, and that from forms like *εἰδέσθαι* : *εἶδε-ται* the *-σθαι* came to be regarded as the ending and was then extended to all kinds of tense-stems, as *λύεσθαι*, *λύσεσθαι*, *λύσασθαι*, *λελύσθαι*, and similarly *δίδεσθαι*, *τίθεσθαι*, *ἵστασθαι*, *δείκνυσθαι*, *ῆσθαι*, *δόσθαι*, *θέσθαι*, *λιπέσθαι*, *πεπύσθαι*, &c. *δέχθαι*, *γεγράφθαι* from **δεκσθαι*, **γεγραπσθαι* (§ 221), and similarly *πεπλέχθαι*, *λελειφθαι*, *τετράφθαι*, *ἐστάλθαι*, *πεφάνθαι*, &c. This type of infinitive became medio-passive in meaning through the influence of the middle personal endings *-σθε*, *-σθον*, &c.

2. Locatives.

§ 549. The ending *-μεν*, which occurs in Homer and in the Aeolic, Doric, Thessalian, Boeotian, Elean, Arcadian and the North-Western group of dialects, is an endglossing locative of a *-μεν*-stem (§§ 273, 345), as in *ἴδμεν*, *τιθέμεν*, *θέμεν*, *δόμεν*, *ὀρνύμεν*, *ἐστάμεν*, &c. Cretan infinitives like *δόμην*, *ῆμην* had *-ην* after the analogy of *φέρην* = *φέρειν*; and similarly *δόμειν*, *θέμειν* in the dialect of Rhodes were formed after the analogy of *φέρειν*.

§ 550. It is difficult to account satisfactorily for the formation of the infinitive in *-ειν*. The difference between the ending *-ειν* in Attic, Ionic, &c. and the *-ην* in Doric, Lesbian and Elean shows that the *-ειν*, *-ην* is the result of contraction. This contraction probably arose from *-εσεν*

and represented an old endingless locative, but as this exact type of infinitive ending does not occur in the other languages, it is uncertain whether the *-εσεν* represents an original formation *-e-sen-* or *-es-i*. In the former case it would correspond to the Vedic forms in *-san-i*, as *nē-ṣāṇ-i*, *to lead*, *sak-ṣāṇ-i*, *to abide*; and in the latter to Vedic forms like *jēṣ-i*, *to conquer*, *stōṣ-i*, *to praise*, and to Lat. *dare* from **das-i*, which are locatives of *s*-stems. We should then have to assume that prim. Greek **φερεσι* became **φερεσεν* through the influence of the *-εν* in the ending *-μεν*.

The Doric and Arcadian ending *-εν* in *φέρεν*, *ἔχεν*, *τράφεν*, &c. was due to the analogy of the ending *-μεν*.

PARTICIPLES.

§ 551. All active participles except the perfect had originally the formative element *-ent-* with the various ablaut-grades *-ont-*, *-nt-*, *-nt-*. For the declension of these participles see §§ 352-5.

§ 552. The formative element of the masculine and neuter of the perfect active participle consisted of the blending of the two distinct elements *-wes-* with the ablaut-grades *-wos-*, *-wōs-*, *-us-*, and *-wet-*, *-wot-*. The relation in which the elements *-wes-*, *-wos-*, and *-wet-*, *-wot-* originally stood to each other is unknown. It is also uncertain which cases originally had the *-s*-form and which the *-t*-form. In Greek the *-wot-* became generalized in the oblique cases, whereas in Sanskrit it only occurred in the instrumental, dative and ablative dual and plural (*vidvādbhyām*, *vidvādbhiḥ*, *vidvādbhyaḥ*), the locative plural (*vidvātsu*), and the nominative and accusative neuter singular (*vidvāt*, *knowing*). This mode of forming the perfect active participle was preserved in Greek, Aryan and the Baltic-Slavonic languages, but in the other

languages only scanty fragments are found. For a similar blending of two distinct formative elements see § 371.

In the masculine nominative singular the *-wos-* was regularly lengthened to *-wōs* (§ 368), cp. *εἰδώς* beside *εἰδότα*, *εἰδότος*, &c., neut. *εἰδός*. In forms like Hom. *τεθνηῶτα*, *μεμαῶτες*, *πεφυῶτας* the *-ω-* of the nominative singular was levelled out into the oblique cases. The stem-syllable had originally the weak grade of ablaut, but in Greek it generally had either the strong grade vowel of the present indicative or the stem-syllable was formed direct from the perfect indicative, cp. *εἰδός* beside Skr. *vidnát*, *λε-λοιπ-ώς* : *λέ-λοιπ-α* beside Skr. *ri-rik-vás* : *ri-réc-a*; and similarly *εἰώς*, *έστηώς*; *γεγονώς*, *δεδορκώς*, *πεπονθώς*, *τετοκώς*, *λελυκώς*, *έδ-ηδώς*, *έρρωγώς*, *έλληλουθώς* beside *έλληλυθώς*; and in all *κ*-perfects, as *έστηκώς*, *τετῆμκώς*, &c. The weak grade of ablaut occurs in *έσταώς* : *έσταμεν*, *βεβαώς* : *βέβαμεν*, *γεγαώς* : *γέγαμεν*, *μεμαώς* : *μέμαμεν*.

The feminine of the perfect active participle had also originally the weak grade of ablaut in the stem-syllable, as in *ιδ-υῖα* = Skr. *vid-úṣī*, *λελακυῖα*, *πεπαθυῖα* : *λεληκώς*, *πεπονθώς*, Hom. *άραρυῖα*, *τεθαλυῖα* : *άρηρώς*, *τεθηλώς*. Forms like *ειδυῖα*, *λελοιπυῖα*, *γεγονεῖα* were new formations from the stem-form of the masculine. Both in Greek and Sanskrit it belonged to the *jā*-declension (§ 322). The original sing. nom. was *-wes-jō*, gen. *-us-jās* which in Greek would regularly have become *-εῖα*, gen. *-υῖας*. Leveling then took place in both directions whereby partly *-εῖα* and partly *-υῖας* became generalized, as *γεγονεῖα*, &c. beside *ιδυῖα*, &c.

§ 553. The formative element *-μενο-* was used in forming all Greek middle participles, as *λειπόμενος*, *λιπόμενος*, *λειψόμενος*, *λειψάμενος*, *λειψθησόμενος*, *λελειμμένος*, *λελειψόμενος*; *ιστάμενος*, *τιθέμενος*, *θιδόμενος*, *δεικνύμενος*, *θέμενος*, *δόμενος*, &c. The formative element originally

had the three grades of ablaut *-meno-*, *-mono-*, *-mno-* (cp. § 240). The first became generalized in Greek, and probably also in Latin in the second person plural of the passive (*legiminī* = *λεγόμενοι*), the second in Sanskrit thematic verbs, as *bódha-māna-h* = *πυθό-μενο-ς*, and the third occurs in isolated forms like Latin *alumnus*, *autumnus*.

§ 554. The passive participle in *-θείς*, as in *λυθείς*, &c. (cp. § 514) was a special Greek new formation formed after the analogy of participles like *φανείς*.

VERBAL ADJECTIVES.

§ 555. The verbal adjectives in *-τό-* originally denoted completed action, but they were not passive in function. They preserved their original function and meaning in Greek, but in the Sanskrit, Latin, Old Germanic and Baltic-Slavonic languages they generally came to be used as perfect or past participles, mostly with a passive meaning, especially when related to transitive verbs. The accent in Greek and Sanskrit shows that the stem-syllable originally had the weak grade of ablaut, cp. *κλυτός*, Skr. *śrutáh*, Lat. *in-clutus*; *στατός*, Skr. *sthitáh*, Lat. *status*, *δοτός*, Lat. *datus*; and similarly *κριτός*, *λυτός*, *χυτός*, *σχετός*, *τακτός*, *φαντός*, &c. beside new formations like *λειπτός*, *στρεπτός*, *τρεπτός* formed from the stem of the present. See § 258.

§ 556. The verbal adjectives in *-τέος* from older **-τέφος*, as in *δοτέος*, *dandus*, *γραφτέος*, *scribendus*, *σταλτέος*, *εύρετέος*, *λυτέος*, *λειπτέος*, *πειστέος*, *τίμητέος*, &c. (§ 255) were a special Greek formation which has no parallel in the other languages.

CHAPTER XIII

ADVERBS

§ 557. Greek adverbs are for the most part of twofold origin. They are partly isolated case-forms of pronouns, nouns, substantivized adjectives, and occasionally predicative adjectives used adverbially, and partly formed by means of suffixes the origin of which is often unknown. It is probable that some at least of these suffixes were the remnants of case-endings which became isolated from the inflexional system already in the parent Indg. language and were then crystallized as adverbial suffixes.

I. CASE-FORMS.

§ 558. The nominative occurs in *ἀναμίξ, ἀλλάξ, ἄλῃς, λέχρις, μόλις, χωρίς, ἐγγύς, εὐθύς*, &c., cp. also Skr. *parāḥ*, *far off*, Lat. *prorsus, satis*.

§ 559. The accusative was often used adverbially in all the Indg. languages, as *αὔριον, δηρόν, μόνον, νέον, σήμερον*, Att. *τήμερον, πλησίον, πρῶτον, χθιζόν*, cp. Skr. *kāmam*, *at pleasure, willingly*, Lat. *domum, rūs, multum*, OE. *ealne weg, always*. *ἀκμήν, ἀρχήν, δήν*, Dor. *δᾶν* from **δᾶν*, *δωρεάν, μακράν, πρόην, σχεδίνην, ταχίστην. πρόφασιν, χάριν*, cp. Skr. *kīm, why?*, Lat. *furtim, partim, facile*. *εὐθύ, πολύ* = Skr. *purú*, Goth. *filu*. Att. *τήτες*, Ion. *σῆτες, χθές* = Skr. *hyāḥ*. *προῖκα, ὄναρ, μέγα*, &c., cp. Skr. *nāma*, *by name*. *ἀλλά, πολλά, πρόκα, πρῶτα, μάλιστα, τάχιστα*, &c. Here belong also the adverbs in *-δον, -δην, -δα* (neut. pl.), the *-δ-* of which was probably the same as in verbal abstract nouns like *χρόμαδος*, and Skr. *samād-*, *fight, battle*. Examples are: *ἀγγελιδόν, ἀμφαδόν, ἀνασταδόν, ἀναφανδόν, βοτρῦδόν, μουναδόν, ρυδόν, σχεδόν, ὠρῦδόν*;

ἀνέδην, βάδην, βλήδην, κλήδην, κρύδην, λίγδην, σποράδην, στάδην, συλλήβδην, χύδην; ἀγεληδά, ἀναφανδά, ἀποσταδά, κρύβδα, μίγδα, φύγδα, χανδά, &c.

§ 560. The genitive occurs in adverbs of time and place, as ἐσπέρās, ἡμέρās, ἔνης, Dor. ἐνās, νυκτός = Goth. *nahts*, OE. *nihtes*. ἀγχοῦ, τηλοῦ, πανταχοῦ, ὑψοῦ, ἐπιπολῆς; αὐτοῦ, ὁμοῦ, ποῦ, πού, ὅπου.

§ 561. The adverbial use of the dative was rare, as in χαμαί, Lat. *humī*, καταί, παραί. The dative supplanted the original instrumental in forms like Attic, Ionic ἀνάγκη, δίκη, ἰδίᾳ, κοινῇ, σπουδῇ, κύκλῳ; ἄλλῃ, ταύτῃ, ἦ, πῇ, τῇ-δε, Cret. ἄλλᾳ, ὅπᾳ. As the dative and locative regularly fell together in the ā-declension it is possible that some of the above forms may be originally locative (§ 305).

§ 562. The locative was common both in nominal and pronominal forms, as οἴκοι, οἴκει, cp. Lat. *domī*, *bellī*, Ἰσθμοῖ, Πύθοι, πανταχοῖ, ἀθεεῖ, πανδημεῖ, cp. Skr. *ākē*, near at hand, *durē*, at a distance; οἶ, ποῖ, Dor. αὐτεῖ, ὅπεῖ, πεῖ, τεῖ-δε, τηνεῖ, τουτεῖ, Att. ἐκεῖ, Cret. διπλεῖ, Θηβαιγενῆς, Elean Ὀλυμπίαι; Ἀθήνησι, Πλαταιᾶσι, θύρᾳσι, ὥρᾳσι. αἰεῖ from *αἰφεσι, ἦρι from *ἄjeri, Μαραθῶνι, Dor. πέρυτι, Att. πέρυσι = Skr. *parut*; endingless locatives were αἰέν, Dor. αἰές, νύκτωρ, cp. the similar -r in Lith. *kuř*, where, Lat. *cūr*, why, Goth. *hvar*, where, Lat. *nocturnus*.

§ 563. The ablative (= Indg. -ōd, -ēd) was mostly preserved in pronominal forms, as οὗτω, Dor. ὦ, ὅπω, πῶ, unde, τῶ-δε, τουτῶ, hinc, τηνῶ, istinc, Locr. ὦ, ὅπω, unde, cp. Skr. *tāt* (= Indg. *tōd), then, in this way, *kāsmāt*, why, *yāt*, in so far as. Delph. φοίκω, domo, cp. O.Lat. *meritōd*, *rectēd*, Goth. *sinteinō*, continually, *piubjō*, secretly.

§ 564. The instrumental occurs in both nominal and pronominal forms, as ἐπι-σχερά, Dor. κρυφᾶ, Att. Ion. κρυφῇ, ἁμαρτῇ, Att. λάθρᾳ, Ion. λάθρη. οὖ-πω, πά-ποτε, cp. Lat. *quō*, τῶ-δε, Ion. ὦ-δε, Lesb. ἄλλᾳ, ὅππᾳ, Dor. ᾗ-τε,

ταυτᾶ, Att. ταύτη, ἥ, *if*, πῆ, Cret. ὁ-πῆ, Lac. πῆ-ποκα, cp. Goth. *ivē*, *wherewith*; Dor. ἔ-χι, Hom. ἦ-χι. Instrumental were also the adverbs in -ω like ἄνω, ἔξω, κάτω, πρόσ(σ)ω; ἄνω-τέρω, ἄνω-τάτω, ἐκαστέρω, ἐκαστάτω, προτέρω, &c. It probably also occurs in the adverbs in -α, as αἰψα, ἄμα, ἄρα, ἦκα, θαμά, κάρτα, λίγα, λίπα, μάλα, παρὰ, πεδὰ, πύκα, σάφα, σίγα, τάχα, ὧκα.

§ 565. The so-called positive of adverbs of quality is originally the ablative singular of the adjective used adverbially to which was added the particle -ς (§ 575). The ending -ως belonged originally to o-stems only, as in καλῶς, σοφῶς, φίλως, δικαίως, &c. From these it became extended to all kinds of stems, as ἡδέως, ἀληθῶς, πάντως, εὐδαιμόνως, χαριέντως, &c.

In the comparison of adverbs it is necessary to distinguish between the adverbs derived from adjectives and those derived from adverbs. For the comparative of adverbs derived from adjectives the accusative neuter singular of the corresponding adjective was used, as σοφώτερον, ἥδιον, and similarly in Sanskrit and Latin. And for the superlative the accusative neuter plural was used, as σοφώτατα, ἥδιστα, and similarly in Sanskrit, whereas in Latin we have the ablative singular of the corresponding adjective, as O.Lat. (inscription) *facilum* = *facillum*, later *facillimē*.

The comparative and superlative of adverbs derived from adverbs had the instrumental ending -ω just as in the so-called positives, as ἄνω, ἄνωτέρω, ἄνωτάτω; κάτω, κατωτέρω, κατωτάτω.

2. SUFFIXES.

§ 566. -θι (= Indg. *-dhi, cp. Skr. á-dhi, *above*, *upwards*, and the -b- in Lat. ubi, ibi) denoting *where*, as in Κορινθό-θι, οἴκο-θι, οὐρανό-θι; ἄλλο-θι, αὐ-θι, αὐτό-θι, κεῖ-θι, ὅ-θι, πό-θι, τό-θι; ἔκτο-θι, ἐνδο-θι.

§ 567. -θα beside -θε(ν) denoting *place*. The relation in which these suffixes stand to each other is unknown, but they are doubtless related to the -ha in Skr. i-há, *here*, kú-ha, *where*. Examples are: ἐν-θα, ἐνταῦ-θα, ὑπαι-θα, Dor. Lesb. ἐνερ-θα, πρόσ-θα beside Hom. ἐνερ-θε(ν), πρόσ-θε(ν), ὀπι-θε(ν), ὀπισ-θε(ν), ὑπερ-θε(ν).

§ 568. -θεν denoting *whence*, as ἀκρο-θεν, Διό-θεν, ἡὼ-θεν, ἱππό-θεν, κλισίη-θεν, οὐρανό-θεν; ἄλλο-θεν, ἀμφοτέρω-θεν, αὐτό-θεν, ὅ-θεν, πάντο-θεν, πό-θεν, Dor. τουτῶ-θεν; ἐκεῖ-θεν, ἐν-θεν, ἐξω-θεν, ὑψό-θεν.

§ 569. -δε denoting *whither* is originally a preposition and is related to Lat. dē, O.Slav. do, OE. tō, *to*, Indg. *dē, *dō, as ἄγρα-δε, ἄλα-δε, Μέγαρά-δε, οἴκα-δε (acc. neut. pl.) beside Hom. οἰκόν-δε, πόλεμόν-δε, φύγα-δε, Ἀθήναζε from *Ἀθᾶνανα-δε (§ 153), and similarly θύραζε.

§ 570. -σε with the same meaning as -δε, as κυκλό-σε, πάντο-σε, τηλό-σε; ἄλλο-σε, ἀμφοτέρω-σε, αὐτό-σε, κεί-σε, ὁμό-σε, πό-σε. The -σε may be the same as Goth. -þ, cp. ἄλλο-σε, πό-σε beside Goth. aljaþ, *elsewhere*, hvaþ, *whither*, but it is difficult to see why the *-τε became -σε in adverbs of place whilst it remained in adverbs of time.

§ 571. -τε denoting *time*, as ἄλλο-τε, αὖ-τε, ὅ-τε, πάντο-τε, πό-τε, τό-τε. Lesbian has -τα, as ἄλλο-τα, ὅ-τα, πό-τα, cp. also Att. εἰ-τα, ἔπ-ειτα.

§ 572. -τος (= Skr. -taḥ, Lat. -tus), as ἐκ-τός, ἐν-τός, cp. Skr. i-táḥ, *from here*, tá-taḥ, *from there*, Lat. in-tus, caeli-tus, fundi-tus.

§ 573. -κα the origin of which is unknown, as in αὐτί-κα, ἡνί-κα, τηνί-κα, Dor. ὅ-κα, ἄλλο-κα, πό-κα, τό-κα.

§ 574. -κας in ἐ-κάς from *σφε-κας, ἀνδρα-κάς is probably the same suffix as in Skr. dēva-śáh (= Indg. *-kṣ), *god for god*.

§ 575. Quite a number of adverbs have forms with and without a suffixal -s, as ἀμφί-ς, οὕτω-ς, πέρυτι-ς beside ἀμφί, οὕτω, πέρυτι (πέρυσι), Delph. οἶ-ς beside the usual form οἶ,

Elean *ἀνευς* for *ἀνευ*, Hom. *ἀτρέμας* beside *ἀτρέμα*, &c. The -s became generalized in adverbs of quality formed from adjectives already in the prehistoric period of the language. The origin of this -s is uncertain. It probably arose from various sources, such as the adverbial forms where the -s was originally a case- or stem-ending, as nom. *ἄλις*; gen. *νυκτός*; acc. neut. sing. *χθές*, and the -s in multiplicative numerals, as *δίς*, Skr. *bhīḥ*, Lat. *bis*. See Brugmann, *Grundriss*, &c., vol. ii, second ed., p. 737.

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CORRIGENDA.

- | | |
|---|-----------------------|
| § 44 note I for σκίδνημι | read σκίδναμαι. |
| 73 „ ὁμόκλα | „ ὁμόκλᾱ. |
| 96 „ ἐσπέσθαι | „ ἐσπέσθαι. |
| 97 „ κέρασαι | „ κεράσαι. |
| 118, 127 „ ὑμείς | „ ὑμεῖς. |
| 129 „ ἀλλεσθαι | „ ἀλέσθαι. |
| 153 „ φερόσθων, *-ονσθων | „ φερέσθων, *-εσθων. |
| 237 „ χρύσειος, χρύσεος | „ χρῦσειος, χρῦσεος. |
| 287 „ ἀριστον | „ ἀριστον. |
| 289 „ ναυκράτης | „ ναυκρατής. |
| „ λαθικηδής | „ λαθικηδής. |
| 402 „ ἐμέθεν | „ ἐμέθεν. |
| „ ἄμε | „ ἄμέ. |
| 431 „ ὠμίλουν : ὁμιλέω | „ ὠμίλουν : ὁμιλέω. |
| 466 (last two lines) for were also formed | read was also formed, |
| and delete πιμπράνω. | |
| 501 for ἐστήκα read ἔστηκα. | |
| 512 „ ἐγήρασα „ ἐγήρῃσα. | |
| 517 „ κεχύμαι „ κέχυμαι | |